Administratio Publica

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INTERNATIONAL FORUM

Editorial

D Nel-Sanders
Chief Editor

The development of new strategic technologies and technological breakthroughs like steam-driven mechanisms, electricity, nuclear fusion, computers and the internet, have so far led to fundamental transformations of human society. In the article '**Governing Artificial Intelligence (AI) and Other Technologies in the Digital Era'** F Cloete discusses the latest progress with the development of nuclear fusion power sources and artificial intelligence (AI) that seems to have the potential of significantly transforming society further, probably both positively and negatively. According to the author, the explosive emergence of still primitive but fully-fledged AI systems in societies across the world in December 2022, has especially caught most people unawares and the speed, scope, potential applications and impact of AI after only a few months, has already been extremely disruptive. For the author, it seems that the alleged Fourth Industrial Revolution (4IR) was in fact only a short-lived introduction and precursor to the much more complex and innovative 5IR era that can herald the start of effective integration of physical, mechanical, digital and cognitive systems at all levels of reality, at both quantum and cosmological levels.

The author attempts to identify and assess the most appropriate recent international regulatory approaches and strategies to manage technology in general but focusing specifically on AI in an increasingly sophisticated digital era. The article provides a comparison and analysis of the latest global experiments in the regulation of technology, and especially of the emerging AI phenomenon as well as an assessment of specific evidence-informed regulatory strategies that seem to be the most appropriate governance tools to maximise the potential benefits of technological innovations for society while simultaneously minimising the potential drawbacks of such governance approaches and strategies.

According to G van der Waldt, social scientists try to make sense of social phenomena using classification systems or typologies. Such typologies are intended to reduce complexity by mapping associated components, dimensions, and properties of concepts, constructs or phenomena under investigation. This mapping process entails arranging variables, concepts and constructs into groups that are internally homogeneous but distinct from other groups to create a structured framework that facilitates analysis and comparison concerning the meaning of a concept by mapping out its dimensions. In his article **'Towards a Conceptual Typology for Government Development Projects',** he argues that scholarly

inquiry into development projects undertaken by government is generally constrained by the particular meaning ascribed to the multidimensional notions of development and projects. Development projects can vary widely in terms of their objectives, scope, and impact. To develop a Weberian ideal-type typology of different categories or types of development projects, the author considered various dimensions along which projects can be classified and proposed a conceptual typology of development projects by merging dimensions of development and project management in a government setting. The proposed typology comprises 13 categories and serves as a framework to guide scholars, policymakers, and practitioners to gain a more comprehensive and nuanced understanding of government development projects.

In their article **'Governance and Organisational Culture in Implementing Food Security Programmes in Rural South Africa',** J Maluleke and B C Mubangizi examine food security programmes in rural South Africa, where poverty widens the gap between policy intent and execution. The article focuses on the complexities of these programmes to bridge the policy and practice gap. The authors found that there is a significant influence of organisational culture on programme effectiveness and the balance between centralisation and decentralisation is crucial, as policy formulation often comes before successful execution in the country. According to the authors, while centralisation can address procurement issues, its success depends on understanding the unique needs of impoverished farmers. They add that rural districts face obstacles beyond logistics, such as political interference, operational inefficiencies, and a one-size-fits-all approach. Hence, to enhance policy implementation, the article highlights the importance of fostering an organisational culture that prioritises adaptability and continuous learning, offering a solution to South Africa's persistent policy implementation problem.

Quality education is globally acknowledged as a fundamental pillar for developmental progress in society and plays a pivotal role in shaping and empowering the future of individuals and communities. In order to determine the impact of the provision of the rural school physical infrastructure (RSPI) on the learners' rights and performance, N Lombo and M Subban in their article **'Physical Infrastructure Challenges in Rural Schools**: **Reflections to Promote Quality Education'**, focused their research on a case in the Eastern Cape Province, because this province is characterised by vast rural areas where the RSPI remains a persistent concern to quality education. According to the authors, the area is characterised by gross underperformance of schools, which manifests itself through consistently low Grade 12 results. The article focused on the role of physical infrastructure in rural schools, examining the state of school buildings, classrooms, libraries, laboratories, and other infrastructural facilities to determine the challenges faced, and to advocate improvements in physical infrastructure

provision to enhance educational outcomes provincially. It focused on the effect of austerity measures, gaps in policy implementation, geospatial challenges, and generally lack of maintenance planning adversely impacting public service delivery. The authors found that learners from rural areas in the Eastern Cape are deprived of basic infrastructure and it has a negative impact in terms of three aspects: infrastructure, performance and learners' rights. This phenomenon calls for an institutional assessment of, and amendment to the existing schools' infrastructure policy in the province regarding the provisioning of additional resources as a fundamental priority.

According to T Sithomola and R Maluleke "In recent years, many of South Africa's major state-owned entities (SOEs) have been impaired by unstable governance structures, particularly the Chief Executive Officer (CEO) position". In the article **'The Ramifications of High and Abrupt Chief Executive Officers' Turnover in South Africa's State-owned Enterprises'**, T Sithomola and R Maluleke argue that citizens as primary stakeholders have witnessed the massive and abrupt turnover of CEOs in critical Schedule 2 and 3B enterprises such as Denel, Eskom, Passenger Rail Agency of South Africa (PRASA), South African Airways (SAA), South African Broadcasting Corporation (SABC) and Transnet. According to the authors this undesirable turnover has led to a state of affairs where boards and senior management of these SOEs deviate from the core production and service delivery mandate to constantly focus on the management of instabilities because of high CEO turnover. Notably, this article principally examines the ramifications of CEO's high and abrupt turnover across major South African SOEs in terms of the roles of CEOs, factors influencing high CEO turnover in SOEs, and the possible course of action to remedy this.

The Namibian government has made progress towards adopting a whole-of-government, results-based monitoring and evaluation (M&E) approach as reflected in various policies and strategies. In their article **'Assessment of the Results-based Monitoring and Evaluation Policy Frameworks in Namibia'** B Nshimyimana and B Rabie investigate the challenges concerning the implementation of these policies to embed strong M&E practices in all offices, ministries and agencies (OMAs). The article adopted a case study design focused on the Namibian policies and guidelines for established effective M&E systems and included studies by the World Bank, the UNDP and the OECD to identify the characteristics of effective M&E systems. A review of the policy and strategy framework adopted by the Namibian government informed a qualitative assessment that compares the current practices in Namibia to the characteristics of effective M&E systems. The authors concluded that while each country should adopt an M&E system aligned to their context, the Namibian M&E system can be strengthened by focusing on the identified success factors to strengthen existing practices and enable successful institutionalisation of M&E across government OMAs.

According to R M Nkga and M M Tshiyoyo, public-private partnerships (PPPs) play a significant role of enabling governmental institutions to plan, finance and implement infrastructure programmes in an efficient and effective manner. PPPs that are successfully implemented present opportunities to countries so that they can boost their economies throughout the stimulation of socio-economic development. The authors state that although PPP projects have been successful in some countries, their implementation in some other countries is confronted by numerous challenges ranging from cost overruns, corruption, poor management, political influence, lack of institutional support and project delays. Their article, **'The Efficiency of the Use of Information Communication Technology in Public-private Partnerships within the Department of Employment and Labour'** discussed the extent to which the partnership between the Department of Employment and Labour and a private entity has been efficient for the implementation of the information communication technology (ICT) project called Information Communication Technology-Public-Private Partnership (ICT-PPP). Their findings reveal that the implementation of the ICT-PPP was partially efficient in the Department and there was a noticeable poor abidance to the legislation guiding public procurement. The article concluded by suggesting for such a project to succeed, both partners need to comply with the statutory and regulatory framework and governance pillars which are the backbone of effective and efficient implementation of PPPs in South Africa.

In the article, **'Key Socio-Economic and Cultural Determinants Influencing Gender Inequality in Education in Developing Countries with Reference to the Case of Rwanda'**, V Nyiransabimana, D B Jarbandhan and C J Auriacombe investigated the socio-economic and cultural factors affecting gender issues in education in developing countries, with specific reference to Rwanda. It highlighted the context of gender equality in basic education, in higher education and among academic staff in higher education in Rwanda. The article identified and discussed the impact of a number of socio-economic and cultural factors promoting inequality in terms of the education of women in developing countries. These factors included culture and religion; poverty; demographic pressure; early marriage and pregnancies; parents' education level; labour market opportunities; dropping out of the education system; lack of required academic performance; attitudes and beliefs; armed and family conflicts; low completion and achievement rates; gender-based violence; parental income; unequal responsibilities and division of labour at home; expectations of the community; gender stereotyping and the role of higher learning institutions.

The article **'Underlining Basis for the National Environmental Policy Design in Ethiopia'** by T A Tiruneh, C Alers and W N Webb focuses on Ethiopia's National Environmental Policy design process. The article explores and describes the National Environmental Policy design in Ethiopia, the problem identification

and agenda setting process, policy goal and objective setting, policy option generation, and what aspects have an impact on the policy design and decision-making process. This article will add to the current public policy discourse by (i) presenting the rational policy decision-making and the bounded way in which decisions are made, (ii) highlighting how environmental policy decisions are shaped by public officials or other individual participants' self-interests to comply with their political ideology or party policy, and their motivation to comply with the international environmental conventions; and to what extent the decision falls under the influence of the environmental experts' scientific knowledge. The empirical investigation demonstrates that the National Environmental Policy design process in Ethiopia has been triggered by the inability of the policy to respond to the emergent environmental changes, and international environmental convention, and to harmonise with the restructured environmental sector. Although significant new environmental issues have been acknowledged higher on the policy agenda, the National Environmental Policy design process is dominated by the ideological, incremental, and elitist policy design approach rather than rational policy analysis. The policy option generation and selection process has not been conducted through generating the possible policy alternatives and weighing up their relative consequences, and decisions seem made under bound rationality using the rule of thumb guided by the ruling party policy and the overpromising intentions of international environmental conventions which affect the quality of the policy and the implementation thereof.

S Ezeanyika, I Opurum and J U Adigwe in the article **'Survival of International Institutions in a Dynamic Global System: A Case Study of the International Monetary Fund'** examines how the International Monetary Fund (IMF) has continued to survive in a dynamic global system in which its dominance is no longer the central feature of the international economic order. This article identifies the current challenges that the IMF as a major financial institution faces, and the strategies the IMF has adopted to address these challenges. The hegemonic stability theory was employed as the major analytical framework to explain the rationale behind the challenges of having emerging competitive institutions as alternatives to the IMF. The authors observed that the IMF has been reinventing itself and finding new roles to perform to survive and that emerging competitive institutions such as the Asian Investment Infrastructure Bank (AIIB) and Brazil, Russia, India, China, and South Africa (BRICS) as alternatives to the IMF in its field of services constitute the major contemporary and fundamental challenge confronting the IMF's survival and existence. According to the authors, these emerging institutions are also a product of a counter-hegemonic strategy championed by China to displace the liberal institutional global order controlled by the United States. Consequently, if China succeeds and the IMF is unable to deal with its challenges, its survival will be at stake. The article proposes that the IMF continues to reinvent

itself to perform new roles and fully implement substantial reforms to improve its governance structure, as well as to embrace realistic remedies to address its criticisms and weaknesses, to retain its aggrieved members and its status as a dominant financial institution.

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In Memorium

Dr Bongani Reginald Qwabe

The late Dr Bongani Reginald Qwabe was born on 31 January 1972 in Jozini, KwaZulu-Natal. He was the youngest of five children, three girls and two boys. Bongani came from humble beginnings, but his parents managed to ensure that all their children were well educated. He completed a B Soc and B Soc Hons Degree at the University of Cape Town and M. Admin and D. Admin degrees in Public Administration thereafter at the University of KwaZulu-Natal. The M. Admin degree was awarded *Cum Laude*.

Bongani was appointed a lecturer at the then University of Durban-Westville in 2000 and in 2009, he moved to the Institute for a Democratic Alternative for South Africa (IDASA) where he had a short work stint during the period 2009 to 2011. He re-joined the University of KwaZulu-Natal in 2011 and was promoted to Senior Lecturer in 2022. He was a dedicated academic who took his work very seriously, was student-centred and on an upward trajectory. He supervised and graduated honours, master's and doctoral students and had numerous publications to his credit. He served for over a year as the Academic Leader (Research and Higher Degrees) in the School of Management, IT and Governance prior to his death. He was one of our younger academics in the Discipline and School who showed tremendous potential, both as an academic and future leader. He was always very collegial, willing to learn and engage with his colleagues on topical issues, setting high standards for himself and the students. It is indeed heartbreaking that his life was cut short at a very early age.

Bongani was a health fanatic and jogged fairly regularly, having completed 10 Comrades Marathons. More recently, he had started cycling and also participated in a cycling marathon from Johannesburg to Durban to raise funds for charity. Dr Qwabe always enjoyed good health and his sudden illness came as a shock when he was diagnosed with leukaemia. His health deteriorated in a few weeks and he passed away peacefully on 21 March 2023, just seven weeks after his 51st birthday.

Bongani was the father of two sons and a very family-orientated person. He enjoyed spending quality time with his wife and family, and often cycled with his sons. He left behind a loving family – his wife Zilungile and sons Qiniso and Ntokomalo. We mourn his loss deeply and our thoughts are with his young family as we wish them strength and courage in processing and handling this tremendous loss. We will always remember Bongani for his sense of humour,

and as someone very collegial, professional, student-centred with a very pleasant disposition, and as an upright, committed and loyal colleague who will be sorely missed in and around our offices.

The late Dr Qwabe was laid to rest at his home town of Jozini (KwaJobe).

May his soul rest in peace.

Hamba Kahle Comrade, *uphumelele empilweni.*

Prepared by Colleagues–Discipline of Governance:
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Governing Artificial Intelligence (AI) and Other Technologies in the Digital Era

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ABSTRACT

The development of new strategic technologies and technological break-throughs like steam-driven mechanisms, electricity, nuclear fusion, computers and the internet, have so far led to fundamental transformations of human society. The latest progress with the development of nuclear fission power sources and artificial intelligence (AI) seems to have the potential of significantly transforming society further, probably both positively and negatively. The explosive emergence of still primitive but fully-fledged AI systems in societies across the world in December 2022, has especially caught most people unawares. The speed, scope, potential applications and impact of AI after only a few months, has already been extremely disruptive. It seems that the alleged Fourth Industrial Revolution (4IR) was in fact only a short-lived introduction and precursor to the much more complex and innovative 5IR era that can herald the start of effective integration of physical, mechanical, digital and cognitive systems at all levels of reality, at both quantum and cosmological levels. Earlier technological innovations produced many benefits, disadvantages and even survival risks that required careful application, regulation, management and governmental oversight, like AI, data privacy and security demonstrated. The same seems to be the case with AI, which also necessitates appropriate governmental regulation, management and oversight measures to ensure that its negative impacts are minimised. This article addresses the most appropriate recent international regulatory approaches and strategies to manage technology in general but focusing specifically on AI in an increasingly sophisticated digital era as well as an assessment of the nature of the digital era and of different competing approaches and strategies of regulation as a tool of general and technology governance. It concludes with a comparison and analysis

of the latest global experiments in the regulation of technology, and especially of the emerging AI phenomenon. A combination of self-regulation by technological developers and suppliers as well as different external regulatory oversight and governance strategies, where necessary, seem to be the best governance approaches for this purpose.

INTRODUCTION

"The rapid advancement of generative AI (gen AI has regulators around the world racing to understand, control, and guarantee the safety of the technology – all while preserving its potential benefits. Across industries, gen AI adoption has presented a new challenge for risk and compliance functions: how to balance use of this new technology amid an evolving—and uneven – regulatory framework" (Kremer *et al.* 2023:1).

"AI governance can't only be about regulating AI developers and organizations. It must also be about governing the AI systems themselves, and the networks that connect them to the data and devices they operate on" (Dentons 2023:6).

The development of new strategic technologies and technological breakthroughs like steam-driven mechanisms, electricity, nuclear fusion, computers and the internet, have so far led to fundamental transformations of human society. The explosive emergence of new, fully-fledged AI systems in societies across the world in December 2022 has caught most people unawares, although AI's impending arrival had been predicted for some time already. The speed, scope and potential expansion of its impact after only a few months, however, has been totally underestimated. With the benefit of hindsight, it is now clear that the much-vaunted 4IR was in fact only a short-lived introduction and precursor to the much more complex and innovative 5IR era that heralds the start of effective integration of physical, mechanical, digital and cognitive systems at all levels of reality – quantum up to cosmological.

As a result of these recent developments, the fast-emerging nature, attributes and potential power of AI still causes confusion and disagreement based on different ideological perspectives, assumptions and calculations of costs, benefits and risks associated with its possible future uses and roles in society. Visual Capitalist (2023) illustrates the exponential growth of this new technological innovation graphically very well.

The main lessons learnt so far from the closest historical comparison to this new, extremely disruptive digital invention, the different practical applications of nuclear technology, indicate an urgent need for effective regulation, control and management of potentially harmful approaches to it, as well as of its potentially negative manifestations, applications and consequences resulting from the accelerated development and negligent, abusive, exploitative and other potentially harmful treatments of this new technology.

The most serious risk currently associated with AI seems to be an emotional fear that the technology might run out of control as had nearly happened a few times in the past with nuclear technologies. Serious unresolved ethical questions also exist about specific applications of this technology in different sectors of society (e.g. realistic deepfake images and voices attributed to celebrities and a range of privacy issues, as well as different economic and political concerns, e.g. job losses and automated decision-making). It is still an open question to what extent the future development and applications of AI can and should be better managed and steered in specific beneficial directions to promote public well-being instead of only isolated narrow interests of the wealthy and powerful. If that could be achieved, the follow-up questions arise of who should do what, why and how?

Whatever the potential outcomes of discussions on these issues might be, it is clear that effective regulation and management of this strategic new technology is needed before it can overcome existing resistance against its adoption as a new, innovative mainstream management and governance tool in public sector contexts.

This article attempts to identify and assess the most appropriate recent international regulatory approaches and strategies to manage technology in general but focusing specifically on AI in an increasingly sophisticated digital era (see also Brand 2022 for an earlier assessment). The research approach and methodology are briefly summarised, followed by an assessment of the nature of the digital era and of different competing approaches and strategies of regulation as a tool of general and technology governance. This is followed by a comparison and analysis of the latest global experiments in the regulation of technology, and especially of the emerging AI phenomenon. The article concludes with a summary and assessment of specific evidence-informed regulatory strategies that seem to be the most appropriate governance tools to maximise the potential benefits of technological innovations for society while simultaneously minimising the potential drawbacks of such governance approaches and strategies.

RESEARCH METHODOLOGY

The methodological strategies utilised for this purpose were typical mixed method approaches (Greene 2007) to environmental scanning, analysis and assessment

(Gordon & Glenn 2009). This comprised combining elements of a traditional qualitative, narrative literature review with a more systematic review of the current knowledge on the issues concerned. It involved the identification, analysis and assessment of the main research findings and conclusions by leading scholars, researchers and experienced practitioners on general regulation for good governance, as well as specific approaches to technology governance, focusing on AI (Hart 2018; Öjehag-Pettersson *et al.* 2023:3). The author has been systematically monitoring cutting-edge developments in this field as part of his research interest and scholarly focus over the past decade. Purposive identification and reviews of the main research outputs of specialised, authoritative thought leaders, international organisations, enterprises and agencies that work in this field were undertaken, facilitated by the criteria, findings and conclusions of the Millennium Project's (2021) report on the issue.

Data collection and triangulation was further enriched by purposively selected, systematic keyword string searches of relevant themes through systematic electronic alerts provided by digital global database indices of the main scholarly publications on the topics concerned (Petticrew & Roberts 2006). These resources included *inter alia* Clarivate Analytics Web of Science, SSCI, IBSS, Scopus, Ebscohost, Google Scholar alerts and most of the major individual scholarly Public Administration and Governance journal alert services by publishers. These research approaches and strategies resulted in a narrower, more cost-effective approach than the alternative of a more comprehensive bibliometrics approach which normally comprises a combination of different quantitative and qualitative strategies to analyse, compare and assess large volumes of research reports (Andres 2009).

The main sources identified and used for these research purposes in this way include the individual contributions cited in the text. These authors represent overlapping specialists and other stakeholders in advanced technology development and use, especially in AI and AI regulation. They are frequently members of the same high-level global research and industrial networks, media spokespeople and competing keynote speakers at seminal discussions and summits on these issues, where they motivate and debate different perspectives and priorities.

DIGITALISATION

As I concluded in another contribution related to this topic, "digital transformation is a specific type of societal transformation. It refers in general to a move from a paper-based analogue system of operation and management by an individual or group to a largely paperless electronic/digital way of operating. Digital transformation of the public sector implies that traditional, paper-based approaches to the provision of public services and other governmental functions are substantially

replaced by digital strategies, interactions and processes" (Cloete 2023:73). Digital transformation must further be distinguished from digitisation and digitalisation (Cloete 2023:74; EU 2019:10).

Digital transformation of society consists of "fundamental changes in the organizational structure of…(an) ecosystem…as a whole by optimal integration of traditional processes and digital technologies with their gradual implementation at all levels" (Morze & Strutynska 2021:5). This fundamental restructuring of society takes place through digitisation ("the technical conversion of analog data streams into digital format"), and digitalisation ("the process of transformation and/or improvement of enterprise activities, business models, business functions, communications, use of online platforms, training and retraining of staff to work in new conditions, through the widespread application of digital technologies and data)" (Morze & Strutynska 2021:5).

Like any other policy and strategy decision, digitisation and digitalisation are managerial decision-making processes that are inherently qualitative and subjective in the conceptualisation of what the problem to be improved is, what to do to improve it, why, for whom, in whose interest, and how. Technologies that are used to facilitate such decisions are all also developed, structured, programmed, deployed and managed from these perspectives and are therefore subject to the same biases that are inherent in human decision-making. Technology is therefore not a totally neutral, objective phenomenon in society. Depending on how it has been designed and applied and for what purpose, why, how and for whose benefit, it can have a positive or negative impact (Öjehag-Pettersson *et al.* 2023:11–13).

The rest of this article attempts to improve the positive impact of technology on society through better governance of AI and other technologies.

THE GOVERNANCE OF DIGITAL TECHNOLOGIES

Governance is both an output and outcome of the process of governing. It is what a government does in its governing process, how it is done and with what result. Olowu and Sako (2002:37) describe this concept of governance as "a system of values, policies and institutions by which a society manages its economic, political and social affairs through interaction within and among the state, civil society and private sector".

The OECD (2019:1) concluded that "(t)he rapid integration of digital technologies is transforming today's societies and economies. An important aspect of this is the change in citizens' and businesses' expectations about their interaction with governments. But meeting these new expectations poses a great challenge for governments. Indeed, it requires the digital transformation of governments themselves; failing to adapt could undermine the social contract. To rise to this challenge,

governments need to change the way they work and organise themselves, and ensure they have the skill sets needed to use new digital tools, work collaboratively and engage with citizens and businesses. This will require, among others, creating or updating relevant legal, regulatory and governance frameworks".

This implies mainstreaming digital technologies in all public governance processes. This transformation process has already started across the world, first in the form of what was initially called electronic government (egovt) and governance (e-govn) that increasingly automated governance procedures and processes through electronic communication technologies like e-mail, and different social media applications as well as the provision of information, interactive and transactional facilities on the internet instead of paper-based processes. The expansion and integration of different technologies heralded the commencement of the current 4IR that established the digital era (Cloete 2023). The new advanced AI technology which was released in December 2023 has already proven itself as probably the most disruptive new technology since the advent of the personal computer in the mid1980s. The *Encyclopaedia Brittanica's* conception of AI is used for purposes of this article. AI is described as "the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings" (Copeland 2023). AI can therefore be regarded as digital simulation of human thought processes.

According to Dentons (2023), one of the largest law firms in the world by headcount (Patterson 2021), the core concern about AI is how to regulate the exponentially increasing autonomy of digital systems, as well as human-AI and AI-AI interaction systems. Narrow automated systems have a fixed script, but emerging autonomous general AI systems have just changeable goals and changeable, discretionary scripts to achieve those goals (Dentons 2023). This is in many respects similar to human thinking and decision-making. However, AI systems are still largely opaque 'black boxes' and even their developers do not always fully understand how they operate. Humans further seem to understand AI systems differently than AI systems themselves. They must all talk and understand each other better in order to ensure effective communication and results (Dentons 2023). Many AI experts predict that such systems will soon surpass human intelligence and therefore pose potential existential and other risks to humanity. However, the nature and implications of this possible development are not yet clear (Esikovits 2024). Better regulation and governance of these issues seem to be necessary.

GENERAL REGULATION IN THE PUBLIC SECTOR

Cloete (2007:2) explains that public governance comprises a combination of strategic functions that any government is supposed to perform: "The generally

accepted role of the State in society is to protect, regulate, develop, maintain and sustain its citizens, or to see to it that this happens. It is an all-encompassing task, which is difficult to execute because inevitably insufficient resources will be available to achieve all of these objectives simultaneously. The state therefore has to prioritise its objectives, and to put together policy programmes that will have the best chance of achieving a combination of these goals not only in the short term but also in the medium and long terms. Governments differ on the combinations/permutations of protective, regulatory, developmental and growth interventions that they make into their societies. These differences in approach can usually be explained in ideological terms: from liberal individualism through nationalistic patriotism to collectivistic socialist approaches to governing. Some governing recipes have proved more successful in achieving a government's goals over time than others".

A Brookings research report confirms this difficult balancing act of government and concludes that any regulatory initiative by government is like walking "a tightrope between protecting the public interest and promoting innovation and investment" (Wheeler 2023).

General regulation of societal activities can for purposes of this article be conceptualised as concrete measures, procedures, processes and other requirements by government that comprise a guiding or controlling framework for specific activities to structure and order societal activities in a specific way. The *Encyclopaedia Brittanica* defines it as "the promulgation of targeted rules, typically accompanied by some authoritative mechanism for monitoring and enforcing compliance" (Woll 2023). Non-compliance of such guidelines or prescriptions can be voluntary or subject to enforced penalties.

Regulation can also in practice be undertaken in different ways. Pritchett (2016:2) identified three main model approaches to regulation in his article in the Regulatory Review. They are a relatively weak *laissez faire* management-based regulatory approach by societal entities themselves, a cooperative performance-based co-regulation approach between a societal entity and government, and a strongly interventionist unilateral, enforced command and control approach by government only, each with its own advantages and disadvantages. They compare as follows:

- **"Management-based regulation**…requires the entity to self-regulate…by engaging in a meaningful assessment and planning process that determines both the institution's goals and the efforts they will undertake to achieve these goals" (Pritchett 2016:3). The regulated entity therefore "sets its own standards and evaluates itself (or through a third, non-governmental party) to determine whether it has achieved these goals…it, theoretically, promotes innovation by enabling institutions to develop, and therefore buy into, their own standards. It is also cost effective, as the government does not have to take on the significant

regulatory burden of developing the goals and measuring the sector's success in achieving them" (Pritchett 2016:4). This bottom-up regulatory approach also has to set and enforce feasible, efficient and effective goals and standards.

- ■ **"Performance-based co-regulation**…does not dictate the materials or processes the regulated entity must use to achieve societal goals, but rather sets ultimate production standards that the entity must meet. (It)…allows the regulated entity the flexibility to determine the most efficient way to meet that standard…promotes innovation and reduces costs by encouraging the regulated entity to figure out the best way to achieve societal goals" (Pritchett 2016:2). The goals pursued and the standards that are set, however, have to be feasible, efficient and effective.
- ■ **"Command & control** is relatively easy for the regulator to observe and evaluate, and therefore to determine compliance" (Pritchett 2016:2). It is, however, expensive to enforce and stifles innovation in a top-down manner.

The Queensland Treasury (2023:1), one of the most innovative treasuries regarding good governance practices, recently developed a useful conceptual spectrum of different approaches to regulation, each with its own advantages and disadvantages (Queensland Treasury 2023:2–4), as depicted in Figure 1. These approaches expand on Pritchett's threefold distinction summarised above. The least interventionist approaches in the Queensland Treasury model are doing nothing, providing just information and education, or voluntary incentives to citizens or businesses to self-regulate their activities in line with government-preferred goals, guidelines and directions. Increasing interventionist approaches by government start with enforceable rules for self-regulation, co-regulation by a target group and government agency, or in the last and most extreme case,

Figure 1: Different approaches to regulatory governance
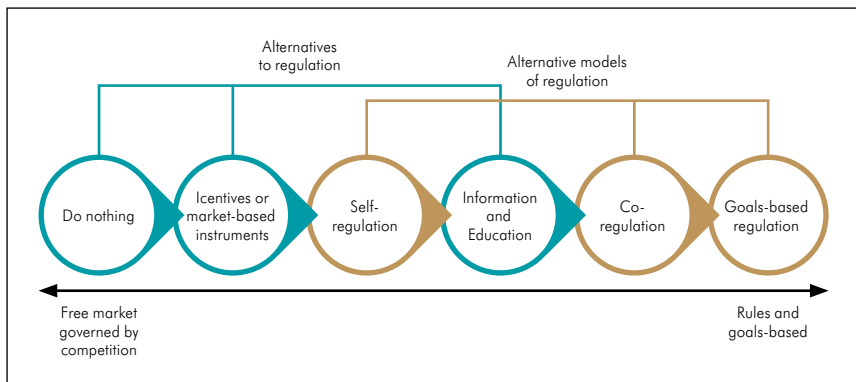
Source: (Queensland Treasury 2023:1)

an external, top-down enforced regulation framework linked to penalties for non-compliance.

Free market democracies tend to minimise direct, compulsory government interventions to promote order, protect society and to care for its vulnerable elements, while maximising voluntary individual choices and discretions of citizens, interest groups and businesses to pursue their own preferred interests in order to maximise creativity, innovation, growth and development. More redistributive-inclined, authoritarian governments, on the other hand, tend to do the opposite. They tend to prioritise strong, top-down direct governmental interventions in most or all sectors of society to protect and care for vulnerable communities and segments of society against exploitation by enforcing measures to alleviate poverty, achieve more equal distribution of resources and empower marginal individuals and groups in society.

The Queensland Treasury (2023:5) proposes a visual decision tree as a decision guide to Australian government agencies to decide what type and level of regulation they could consider for general optimal good governance purposes.

APPROACHES TO REGULATE AI AND OTHER ADVANCED TECHNOLOGIES

Brookings found in one of its latest research reports that the regulation and governance of technology is in principle no different from the regulation and governance of any other aspect of society. Government's overall mission to find an effective, efficient, affordable and sustainable balance between peace and order, empowerment through development and growth and care and sustenance for those vulnerable segments of society who need such support and assistance, are also directly relevant here (Signé 2023a:2). However, against this background, McKinsey concludes that "(a)s governments and regulators try to define what such a control environment should look like, the developing approaches are fragmented and often misaligned, making it difficult for organizations to navigate and causing substantial uncertainty" (Kremer *et al.* 2023:1).

Brookings identifies the following three specific regulatory and governance complications that the new technological phenomenon of AI poses (Wheeler 2023):

- The exponential **pace** of AI development, its potentially serious existential and other technical sectoral risks as well as its potential financial benefits that encourage illegal activities, and an urgent, agile need for regulation to keep track and ahead of new developments (see also the Brookings report by Signé 2023a:2).
- **What to regulate and why**, especially in the light of criminal activities that it can facilitate and expand (e.g. automated and more scams, improving efficiency, effectiveness and innovation via fake audio calls, messages & visuals),

as well as its facilitation of violation of personal privacy via illegal data collection and use, and its potential for manipulation of economic, social and political processes, decisions and actions of individuals and organisations to benefit some more than others, and dissemination of hate, lies and misinformation (see also the McKinsey report by Kremer *et al.* 2023:2).

- ■ **Who has to do it:** Should it be voluntary or compulsory internal self-regulation that could possibly make wolf shepherd, or should it be external regulation by government or a special regulatory agency?

Brookings advocates a risk-informed approach to AI regulation and governance, as depicted in Table 1.

Table 1: Risk-informed approach to AI regulation and governance

Degree of risk	Nature of risk
Minimal risk	Video games, spam filters
Limited risk	Chatbox transparency to make consumers aware what they use
High risk	Critical infrastructure, product safety, employment, law enforcement
Unacceptable risk	Clear threats to safety, livelihoods and rights of people

Source: (Adapted from Wheeler 2023)

This approach implies that minimal and limited risks are managed largely through self-regulation, while high and unacceptable risks are subject to stricter external governmental regulation.

Both the Queensland general regulatory decision spectrum and tree and the Brookings-Wheeler technology risk decision guidelines and framework are useful conceptual guidelines to facilitate taking the most appropriate AI and other technology regulatory decision within a specific context. These issues have so far found application in different ways in practice, depending on how the regulatory regime perceives its highest priorities. The globally most influential and authoritative AI and other technology regulatory practices at the time of writing this article (early January 2024), are summarised next.

AI AND OTHER TECHNOLOGY REGULATION STRATEGIES IN PRACTICE

Advanced technology regulation strategies across the globe can be distinguished on the basis of their AI capacity and influence in global practice (The Diplo Foundation

2023:2, 4; Tortoise 2023). As could be expected, more developed societies in North America, Western Europe and China are leaders in this field, while less developed societies in Eastern Europe, Latin America and Africa are lagging relatively far behind. The highest national rankings in the authoritative global Oxford Insights AI Readiness Index (Oxford Insights 2023:47), indicate that the countries with the highest rankings are also those that have the most comprehensive and globally influential technology policies and regulatory approaches. The accuracy and validity of the Oxford Insights ranking index is confirmed by the Tortoise (2023:3) Global AI Index and the Stanford Human Centered AI Index (Stanford 2023:267).

Different approaches to regulate AI technologies have taken root across the world in the respective national AI strategies, since 2018 when concerns about the impact of emerging advanced technologies, including AI, started to develop. Today, current approaches and practices are still widely divergent and insufficiently coordinated, as McKinsey again found: "The goal is to establish harmonized international regulatory standards that would stimulate international trade and data transfers. In pursuit of this goal, a consensus has been reached: the gen AI development community has been at the forefront of advocating for some regulatory control over the technology's development as soon as possible. The question at hand is not whether to proceed with regulations, but rather how" (Kremer *et al.* 2023:2).

No stakeholder is really in favour of a totally free hand for AI development and application, given the current negative impacts that *inter alia* fake news and criminal abuse of the relatively primitive emerging AI technologies through invasion of data security and privacy have already had during the short period of just 12 months of their existence. According to McKinsey, the different country approaches correspond largely to the ideological attributes of the ruling regimes in those countries, their preferred policy priorities and their capacity to enforce those strategies. (The conceptual, generic approaches summarised above). Common goals or principles that have emerged so far from these different experiments include general acceptance of the need for systematic, consistent and effective:

- responsibility and accountability of developers, vendors and users for the impact of their processes and products on society,
- protection of user data privacy and security,
- promotion of sustainability,
- self and/or external regulation, monitoring and governance to improve the technical robustness and safety of AI as well as transparency about how AI works and how and where it is applied,
- human oversight over the development and applications of AI in the interest and to the benefit of individuals, society and democracy, and
- absence of bias, discrimination and unfairness in AI treatment of people (Signé 2023a:3; Kremer *et al.* 2023:3–4).

These common goals are, however, pursued by different stakeholders in different ways, using different terminologies. Regulation of AI is an emerging phenomenon given its short lifespan so far, and is still subject to continuous changes, refinements and improvements that make it difficult to stay abreast of developments. This has created a chaotic situation where some institutions and countries have banned AI applications like ChatGPT because of non-existing, unclear or inadequate copyright and other intellectual property protection. Activities like data management, art, literature, higher education, crime prevention, and other societal sectors are in turmoil as a result, leading to uncertainty and a surge of litigation and increasing volumes of regulatory measures to try to stem the disruption caused by this new technological breakthrough and to stabilise the technological industry again.

Brookings identified a general emerging consensus that systematic, globally coordinated regulation should be undertaken at multiple levels (Signé 2023a:2). An earlier Brookings report by the same author also concluded that "…(c)hange-makers need to go beyond announcing eye-catching initiatives such as regulatory sandboxes and engineer a cultural shift in regulation across government, learning lessons from innovators themselves on how to foster change. In developing their strategies, governments need to consider how to engage with what the market really needs and adapt their approach dynamically as the world changes". The Brookings research (Signé & Almond 2021:2) proposed in 2021 already "…six steps to address the pacing and coordination challenges, including anticipating innovation and its implications, focusing regulation on outcomes, creating the space to experiment, using data to target interventions, leveraging the role of business, working across institutional boundaries, and collaborating internationally".

The 2023 World Economic Forum (WEF) further emphasised "three critical factors: policy, process, and products. Robust policies to assess boundaries, avoidance of discriminatory practices, and clear standards were advocated. Trust layers at platforms, toxicity assessments, and zero data retention were presented as pivotal components. Engaging with upcoming regulations, anticipating innovation, and aligning interventions with values also emerged as key strategies" (Signé 2023a:3). Based on research that Brookings have undertaken for the WEF Davis, Signé and Esposito (2022:1) proposed "…three tools that can be leveraged to support fit-for-purpose technology regulation for the 21st century: First, a transparent and holistic policymaking levers that clearly communicate goals and identify trade-offs at the national and international levels; second, revamped efforts to collaborate across jurisdictions, particularly through standard-setting and evidence gathering of critical incidents across jurisdictions; and third, a shift towards agile governance, whether acquired through the system, design, or both".

McKinsey also monitors these developments and has listed the chronological order of the most influential AI regulatory attempts across the globe, starting in

2017 in South Korea, with the latest and most comprehensive attempt at regulating this new industry by the EU in December 2023 (Kremer *et al.* 2023:4–5). In December 2023, Denford, Dawson and De Souza (2023:2) found in another Brookings Institution report that 34 countries have published national AI strategies. The report assessed and compared six AI elements in these national strategies: algorithmic and data management, governance, capacity for development, sectoral industries and public services most relevant for AI applications. The research defined AI governance as "the inclusivity, transparency, and public trust in AI and the need for appropriate oversight. AI governance involves AI security, regulations, social inequality impact, risks, intellectual property rights protection, and interoperability" (Denford, Dawson & De Souza 2023:3). It also found that those national strategies focused on 11 public services sectors that are regarded as the most relevant for AI applications, comprising defence, public safety and justice, immigration, transport, income and expenditure, ICT, healthcare, education and the environment. Denford, Dawson and De Souza (2023:3) depict three clusters of national strategies ranging from the most comprehensive approach dealing with most issues identified above (e.g. the USA, Australia and Denmark) to only a few issues (e.g. Canada, Austria, and the Netherlands).

Brief summaries of a selection of the most authoritative and influential regulatory strategies that have emerged so far, based on their global scope and impact, are assessed in more detail next. Strategies focusing primarily on self-governance are summarised first, followed by those that combine self-government and increasing externally enforced regulation and governance measures. The assessment concludes with the emerging situation in Africa.

AI DEVELOPERS, VENDORS, AND GOVERNMENT AND CIVIL SOCIETY NETWORKS

All technology developers are in favour of at least self-regulation in some or other form, while external regulation by government has already been endorsed in principle by OpenAI, Microsoft, Meta and Google (Wheeler 2023). Some of the most prominent AI developers have urged governments to also adopt safety checks and licencing requirements for AI. These include OpenAI, Google and Microsoft (Strickland 2023:3; Sundar 2023). This strategy, however, promotes protectionism and can create monopolies. Generally, AI developers and vendors prefer minimum external regulation, in order to maximise innovation and growth in this sector through their entrepreneurial freedom and discretion.

Many individuals, agencies, enterprises and governments across the globe who already have had some experience with the impact of sophisticated, advanced AI applications in many societal sectors, however, disagree with this minimal,

bottom-up technology governance approach as the only strategy. The potential and proven risks of minimal or unregulated AI development and applications, especially in the fields of undue influencing of societal factions, criminal exploitation and cognitive development, have so far delayed emerging consensus about what to regulate, why, how and by whom. In addition to these demonstrated threats and weaknesses, the most serious concern among some pessimistic high level technology development as well as user experts and governments, include the fear that AI could soon surpass human intelligence and even pose existential risks for humanity if it starts operating autonomously without effective human supervision and control. This led many governments and international agencies to consider other forms of external regulation and governance to try to minimise these potential and real negative impacts of advanced technology applications on their societies.

The Electronic Privacy Information Centre (EPIC) in Washington DC, a civil interest group focusing on effective AI governance, monitors AI policies around the globe and has compiled a comprehensive AI Policy Sourcebook that it intends to update regularly for policy and governance stakeholders as well as for the public. It "focuses public attention on emerging privacy and civil liberties issues and protects privacy, freedom of expression, and democratic values in the information age" (Rotenberg 2019). The website Politics +AI also follows a similar approach, focusing on the intersection between AI and politics. It contains a comprehensive list of changing AI strategies worldwide (Dutton 2023).

At the end of October 2023, the G7 countries also adopted the international 'Hiroshima Process' principles for the development of AI as well as a code of conduct for this purpose (G7 2023; Strickland 2023:9; Mearian 2023). It will be voluntary for now, and only enforceable if it is taken up in those countries' legislation. The intention is to develop these documents into a Hiroshima AI Process Comprehensive Policy Framework. This will be done in cooperation with the Global Partnership on AI, a multilateral network of OECD, UNESCO, and other interested parties to promote global coordination of generative AI (GPA 2023; UNESCO 2022).

In 2019, the OECD adopted 10 AI principles that all OECD member states should comply with. The OECD also proposed an agile experimental pilot project approach to AI policy regulation that combines transparent self-regulation (e.g. voluntary standards, codes of conduct and best practices) with external monitoring, oversight and assessment mechanisms and enforcement.

Canada

Canada is at the forefront of global AI research, development and application. It was the first country to adopt a national AI policy document, in 2017 (Dutton

2023). The Pan-Canadian Artificial Intelligence Strategy is a framework "intended to ensure the proactive identification and mitigation of risks in order to prevent harms and discriminatory outcomes, while recognizing the unique nature of AI ecosystem and ensuring that research and responsible innovation are supported" (Canada 2023:2; CIFAR 2023). The Canadian government adopted an agile approach to AI self-regulation "that will not stifle responsible innovation or needlessly single out AI developers, researchers, investors or entrepreneurs… by developing and evaluating regulations and guidelines in close collaboration with stakeholders on a regular cycle and adapting enforcement to the needs of the changing environment" (Canada 2023).

Canada also participated, together with the US, UK and EU, in the establishment of a Global Partnership on AI (GPAI) to promote the global coordination of AI governance strategies (Canada 2023). The Canadian approach focuses on preventing or reducing different harms to individuals by AI applications, by requiring enforced compliance, linked to penalties for non-compliance, from developers and users to a range of principles aligned with emerging international AI governance standards. These principles are human oversight and monitoring, transparency, fairness and equity, safety, accountability, validity and robustness (Canada 2023).

United States of America

In February 2022, before the exponential explosion of AI in December that year, an Algorithmic Accountability Bill was tabled in the US Congress, requiring companies "to assess the impacts of the automated systems they use and sell, creates new transparency about when and how automated systems are used, and empowers consumers to make informed choices about the automation of critical decisions" (Wyden 2022). The Bill, however, got stuck in the legislative process and was abandoned.

US Senate Majority Leader Schumer announced early in 2023 his intention to introduce legislation in Congress in the form of a framework containing four 'guard-rail' safeguards to deliver transparent, responsible AI and to reduce its abuse and misinformation in such a manner that innovative AI development can still flourish. These guardrails deal with who, where and how it should be done, as well as protecting people and society from possible harm. The framework will include the provision of information, provide for AI regulation, reduce potential negative impacts and harm and align these systems with the country's core values to benefit society optimally. The legislation will also provide for independent, transparent review and testing of AI technologies before they are made available (Schumer 2023).

The first concrete regulatory progress was made in early October 2023, when President Biden announced a flexible, civil rights protection approach to AI with

a voluntary 'Blueprint for an AI Bill of Rights' (Strickland 2023:8). It confirms the application of AI for law-enforcement surveillance, but aims at protecting citizens "from algorithmic discrimination, privacy intrusion, and other harms" (Strickland 2023:8). The AI Bill of Rights had a mixed reception. Some experts indicated that it is a simple, incremental forward step (Atlantic Council 2023a), while it is regarded by others to be 'too little, too late', compared to the steps that were initially considered by other governments, especially in the EU (Strickland 2022; Brookings 2023). However, the latest global trend seems to be that governments are wary to adopt too strict and rigid regulatory frameworks, because they might negatively impact on the emerging AI economies across the world. The focus seems to be on a cautionary, experimental approach of voluntary self-regulation according to specific criteria laid down by government, first, and only turning more interventionist if those initial measures do not provide satisfactory results (Friedler *et al.* 2023; Perault *et al.* 2023).

At the end of October 2023, The White House issued a comprehensive policy in the form of an Executive Order to ensure the safe, secure, and trustworthy development and use of AI in the US. The order identified eight guiding principles and priorities for AI governance. They are safety, security, privacy, equity, civil rights, innovation, competition, and global leadership. The order also mandates various activities to monitor and assess the implementation and enforcement of these principles. These activities include safety testing and information sharing for the most powerful AI systems, developing standards and tools for AI evaluation, protecting against the risks of using AI to engineer dangerous biological materials, and advancing AI research and education (White House 2023).

New York City has also adopted new rules for employers to ensure that job seekers are informed that their applications will be reviewed by AI systems that will be audited independently (Lohr 2023). This reduces black box opacity by disclosing AI use in governmental activities (Wheeler 2023).

The National Institute of Standards and Technology (NIST) in the USA has also adopted a Framework for AI Risk Management. This voluntary framework identifies "approaches that increase the trustworthiness of AI systems [and] help foster the responsible design, development, deployment and use of AI systems" (NIST 2023).

The US is further also considering a Digital Platform Commission Act to oversee the implementation of digital platforms in the USA (US Congress 2023).

United Kingdom and South-East Asia-Pacific

The UK and most southeast Asian nations have adopted *laissez faire* approaches so far, by expanding existing technology regulations to also deal with AI.

The UK decided to suspend possible AI regulation in the short term not to inhibit AI development in the immediate future (UK 2021; *Financial Times* 2023;

Strickland 2023:4; Satariano & Kang 2023). Japan adopted voluntary guidelines to regulate AI (Japan 2023; Mapp 2022) while India also decided to take a more leisurely approach with minimal government intervention (India 2023; *Economic Times India* 2023; Mapp 2022).

Similar business-friendly *laissez faire* approaches to the regulation of AI are in progress in most other southeast Asian countries, with the exception of Mainland China and South Korea, that follow relatively strict, top-down regulatory compliance approaches (Mapp 2022). At the end of 2023, a draft voluntary guide to AI ethics and governance was also under consideration among the 10-member Association of Southeast Asian Nations (ASEAN) (Potkin & Mukerjee 2023; Leng 2023).

De Loitte (2024) compiled a comprehensive analysis and assessment of AI regulatory approaches in the Asia-Pacific region. As is the case in Western countries, these approaches also range from just promoting voluntary self-regulation in Taiwan (2024), Singapore and Australia to stricter, enforceable external legal instruments in Mainland China, South Korea, Vietnam and the Philippines. Some countries (like Mainland China and South Korea) are also much further down the implementation and enforcement road than others (e.g. Thailand and the Philippines) (De Loitte 2024; Mapp 2022).

European Union

In June 2023, EU officials initiated the development of a self-regulated voluntary draft AI Code of Conduct for AI enterprises to start the transition to a uniform international approach for regulation, in cooperation with the US government and big global technological companies (Zubaşcu 2023). At the end of 2023, however, the EU adopted a specialised, enforceable regulatory AI Act (EU 2023; Meaker 2023) that set new requirements for AI applications. This might restrict digital entrepreneurs from establishing and growing competitive AI businesses. The EU AI Act "uses a tiered structure based on risks. AI applications that pose an unacceptable risk would be banned; high-risk applications in such fields as finance, the justice system, and medicine would be subject to strict oversight. Limited-risk applications such as the use of chatbots would require disclosures" (Strickland 2023:4). Risk is determined by the envisaged applications of AI products, and more serious systemic risks are subject to stricter regulation (Chan 2023). In contrast to the US, the EU also envisages a partial ban on biometric surveillance, including facial-recognition systems that are already used for law enforcement (Meaker 2023; Chan 2023). Heavy penalties are prescribed for non-compliance.

An expert on the regulation of technology, law professor Anu Bradford at Columbia University in New York, regards the EU AI Act as "the world's first comprehensive, horizontal and binding AI regulation that will not only be a

game-changer in Europe but will likely significantly add to the global momentum to regulate AI across jurisdictions. It puts the EU in a unique position to lead the way and show to the world that AI can be governed, and its development can be subjected to democratic oversight" (Chan 2023). An assessment of the EU AI Act in the MIT Technology Review heralded it as "one of the world's most important developments in AI regulation" (Ryan-Mosley 2023) and a tone-setting standard for the world (Meaker 2023). Various other experts on the issue largely agreed but concluded that the manner in which it would be implemented, would determine its level of success (Atlantic Council 2023b). Many influential proponents of stricter protection of human rights and digital privacy voiced their dismay at the AI Act which in their opinions does not yet go far enough to protect these issues (Chee *et al.* 2023).

The EU's 2108 General Data Protection Regulation (GDPR), however, already set standards for the regulation of digital privacy and protection around the world (EU 2018). The policy regulates data collection and use to require explicit approvals and access for monitoring purposes (Schneider 2020:12).

However, France, Germany and Italy have reservations about the too strict regulation that the Act contains. They prefer the 'softer' approach of self-regulation not to inhibit the development of AI and its potential positive impact on their economies (Satariano & Kang 2023). At the time of writing this article, negotiations have been ongoing in the EU to try to create a better balance between innovative development and application of AI, and regulation of its potential and real negative impacts (Chee *et al.* 2023).

Brazil

In May 2023, the Brazilian government published a new AI Bill that outlined human rights values and guidelines for regulating AI. The Bill "establishes the creation of a new regulatory body to enforce the law and takes a risk-based approach by categorising AI systems into different categories. It also introduces a protective system of civil liability for providers or operators of AI systems, along with a reporting obligation for significant security incidents" (Access Partnership 2023). Transparency of AI processes is required and AI use in specific sectors is prioritised as high-risk applications and strictly regulated. Regular impact assessments "must take into account several factors pertaining to the artificial intelligence system, such as foreseeable and known risks, associated benefits, likelihood and gravity of negative outcomes, operational logic, conducted tests and evaluations, mitigation measures, training and awareness, transparency measures for the public, and others" (Access Partnership 2023). Regular quality-control tests must also be undertaken on AI products, overseen by an independent regulatory agency.

China

China was the first country to adopt (in 2022) comprehensive compulsory rules for its business and civil society sectors to regulate AI (Sheehan 2023). Three different approaches are followed, as summarised in Table 2. The first is a programme aimed at reducing the potential for manipulating user attitudes and behaviour, includes strict requirements for verification of the accuracy of data used in AI processes aimed at public consumption, transparency in the application of recommendation algorithms as well as the opportunity for users to opt out of such algorithms (Strickland 2023:7). A second approach is a focus on the development of measuring instruments to ensure that AI systems are accurate, trustworthy and controllable. The third approach comprises the compulsory development of a self-regulatory system of internal management of the development and application of AI systems by role-players in this field in the form of a three year roadmap, including a set of ethical principles that those players should apply (Sheehan 2023; Mapp 2022).

These approaches are similar to those developed by the OECD, UNESCO, the US and EU, and have been transformed into top-down enforceable policies much sooner, probably because of the simpler, centralised decision-making system in China (Sheehan 2023).

Brookings found that China has so far invested strongly in different forms of technology capacity building, which might at least partially explain this comprehensive approach in technology regulation (Denford, Dawson & De Souza 2023:3). According to Chan (2023), "President Xi Jinping has also proposed a Global AI Governance Initiative, calling for an open and fair environment for AI development".

Africa

As explained earlier, African countries generally lag far behind the rest of the world in advanced technology, including AI capacity, and governance (e.g. Wakunuma *et al.* 2022). African countries are, however, very divergent among themselves in terms of these attributes. South Africa, Nigeria, Egypt and Kenya have so far (in this descending order), made the most progress in this field on different AI-related issues (Diplo Foundation 2022:3; Adams 2022).

Signé (2023a:4) summarised and assessed the impact of Africa's 4IR on the continent and proposes various strategies "…to maximize the benefits while reducing the risks associated with disruptive technological innovation. The importance of inclusive dialogues, diversity, and sector-specific risk approaches were highlighted, recognizing *the varied perspectives and concerns at play*" (expanded in Signé 2023b). The African Union's (AU) Malabo Convention on Cyber Security

and Personal Data Protection (AU 2014) also confirms these similarities, refuting the idea of Western, Eastern or African exceptionalism that requires different approaches. This convention deals with similar northern aspects of technology regulation, including some AI elements, as well as the need for harmonised regulation throughout the continent to deal effectively with technology risks to data privacy and security (AU 2014:2). It also proposes rules for externally regulating and protecting data collection, processing, storage, use and security as well as e-commerce by national and AU data protection and cyber security monitoring agencies, subject to penalties for non-compliance (AU 2014:12, 17, 27). However, the convention needs to be ratified by individual African countries and taken over in those countries' domestic legislation to be enforceable (Musoni 2023). A total of 15 member countries of the AU had ratified the convention by July 2023, making it operational. South Africa has not yet ratified it out of concern about its incompatibility with its domestic legislation on ICTs and information.

The 2022 AU Data Policy Framework provides a template for the incorporation of the 2014 AU convention into member countries' domestic legal systems. The framework template therefore explicitly aims, as is the case in the global north, at the creation of "a consolidated data environment and harmonised digital data governance systems to enable the free and secure flow of data across the continent while safeguarding human rights, upholding security and ensuring equitable access and sharing of benefits" (AU 2022:iv). The framework is similarly informed "by the broad principles of transparency, accountability of institutions and actors, the inclusion of stakeholders, equity among citizens and fair competition amongst market players. The principles guiding the framework include trust, accessibility, interoperability, security, quality and integrity, representivity and non-discrimination" (AU 2022:viii). However, 18 African countries still do not have any significant data protection laws (Musoni 2023:2).

In 2021, a Blueprint for AI in Africa was published, initiated by South Africa, Rwanda, Uganda and GIZ (Smart Africa 2021; Ngila 2022). The document was created as an input for the AU to develop a model African AI governance strategy for the continent, aligned with the African Charter on Human and Peoples' Rights (Musoni 2023:5), including regulating the risks and applications of AI. This project is ongoing. South Africa is the lead country for this purpose and manages the development of this model continental strategy as part of its own domestic 4IR programme (Smart Africa 2021:14).

South Africa, Egypt, Rwanda, Mauritius, Kenya, Ghana, Ethiopia, Uganda, Tunisia and Morocco are the most advanced African countries that either already have specific regulatory frameworks on AI or are developing such policy frameworks (Musoni 2023:4–5). South Africa, Egypt and Mauritius are the best prepared for AI (Diplo Foundation 2023:132; AI Media 2022). These countries are also some of the most advanced African economies. Kenya, Mauritius,

Egypt, Rwanda and Nigeria have already taken some steps to implement externally monitored and enforced official policies, strategies or agencies to govern technology better in various ad hoc ways. However, implementation and enforcement of these measures has so far not been very effective (Diplo Foundation 2022:131–132, 179, 183, 192; Siele 2023; Ngila 2022; Rwanda 2022; Nshimiyimana 2023; Uba 2023).

South Africa, Ghana and Ethiopia are all in the early stages of considering AI policies. They have built up some capacity and experience with advanced technologies in different sectors but have so far made little progress to institutionalise their activities in a systematic policy system. Multinational technology companies also directly support the development of advanced technology and AI capacities in these and other African countries (Diplo Foundation 2023). South Africa has the strongest advanced technological capacity on the continent. It especially developed a strong focus on 4IR over the last five years, but the South African government has not yet formally adopted a national policy or strategy for this purpose (Diplo Foundation 2022:132–133, 176, 185; SA 2020: 14; Brand 2020; Brand, 2022; RIA 2023; FBC 2023).

It is clear from the above summary and assessment that African countries still have a long way to go to catch up with the leaders in AI capacity and governance.

ASSESSMENT AND CONCLUSIONS

The main governance mandate of any government is to protect its citizens from all sorts of threats and abuse of vulnerable segments of its society, but simultaneously to enable and stimulate societal development and growth for all citizens. The governance of technology (including AI) is from a democratic perspective no different than a government's obligations in any other sector. However, it is not always easy to determine what mix of protective, care, development and growth measures should make up the policy toolbox of a government, because the nature and combination of tools for various purposes differ, depending on *inter alia* the context, needs, demands, governmental policy, ideological objectives, priorities and available resources. This explains the divergent governmental policy responses of different countries across the globe, ranging from minimal interventions by free market-orientated governments in the social and economic lives of their citizens on the one hand; to strict central command and control systems regulating virtually every aspect of their citizens' lives in strongly socialist redistributive governance systems, on the other.

The various technological policy governance responses identified and assessed in this article, exhibit the same divergences in style, goals and priorities as occur in other policy sectors. The unresolved question is still what the optimal

balance between free market creativity and innovation and societal protection in the field of advanced technological development and application is. As is the case in other policy sectors, the answer differs from one national and regional context to the other, influenced by the core variables listed above. From a democratic perspective, the most feasible and appropriate approach seems to be to start with identifying the main strategic principles, guidelines and standards for voluntary technology self-regulation with both internal and external monitoring of progress, followed by increasingly stricter external enforcement of compliance if self-regulation does not work well enough. This can comprise soft regulation like informing, enabling, expansive, conferring rights, benefits and protection. If that does not work, then government should inevitably fall back on hard regulation like prohibitive, restrictive, punitive, compliance, enforcement, reactive or pre-emptive, directly or indirectly, in-house or separate agency (e.g. licencing, inspection, reporting).

This sequence of increasing shifts to external monitoring and intervention where needed for more effective compliance, can include explicitly regulating the transparency of black boxes and experimenting with providing and enforcing minimum compliance standards. It can also include specialised regulatory oversight bodies to enforce regular compulsory technological impact assessments to determine and assess both positive and negative impacts and risk levels (Friedler *et al.* 2023).

The focus of technological and especially AI regulation should be less on micro-managing technology itself and more on strategic outcomes in an agile manner like the EU, recognising that there is no 'one-size-fits-all' solution (Wheeler 2023). A risk-focused approach based on enforceable technical and behavioural standards (codes of conduct) should probably be the starting point. It can be based on the model of the US Financial Industry Regulatory Authority (FINRA). This agency governs financial issues markets through an industry-developed code of conduct subject to the oversight of the Securities and Exchange Commission (SEC). An alternative approach is that of the North American Energy Reliability Corporation (NERC) that develops policies jointly with the energy industry to prevent energy blackouts (Wheeler 2023). These regulatory activities should also always be undertaken under human oversight, supervision, monitoring and control to maximise safety (Kremer *et al.* 2023: 6–7).

The main advantages of this gradually more externally interventionist approach from a democratic perspective, if needed, is that it first recognises the need for allowing and promoting positive, creative and innovative technological impacts on society. Externally enforced regulation of too high risks and too negative impacts on society caused by advanced technology development and applications, can with this approach only be activated when those risks of negative technological impacts on society are not effectively reduced, controlled or eradicated through

voluntary self-regulation measures. Then the regulatory approach or focus shifts into another gear, prioritising more explicit protection, fair treatment, and non-discrimination as advocated especially from a more socialist, redistributive perspective.

The main disadvantages of this technological governance model include that it can lead to undue central control and government intervention in the economy and society from a liberal perspective and stifles growth and development if it is not applied appropriately.

The experts at the 2023 WEF AI Governance Summit concluded that "...responsible AI development requires a concerted effort, involving diverse stakeholders, ethical considerations, and a commitment to navigating the complex landscape with transparency and inclusivity" (Signé 2023a:4). It is also clear that these different national approaches, strategies and focuses make it extremely difficult for global AI enterprises that operate across the world in different national contexts, in the absence of uniform approaches to regulation.

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Towards a Conceptual Typology for Government Development Projects

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ABSTRACT

Social scientists try to make sense of social phenomena using classification systems or typologies. Such typologies are intended to reduce complexity by mapping associated components, dimensions, and properties of concepts, constructs or phenomena under investigation. This mapping process entails arranging variables, concepts and constructs into groups that are internally homogeneous but distinct from other groups. Resultant categories should relate to one another but are not hierarchical in nature. By identifying commonalities and differences, researchers can create a structured framework that facilitates analysis and comparison. A conceptual or descriptive typology is a type of classification system that explicates the meaning of a concept by mapping out its dimensions.

Scholarly inquiry into development projects undertaken by government is generally constrained by the particular meaning ascribed to the multidimensional notions of development and projects. Development projects can vary widely in terms of their objectives, scope, and impact. To develop a Weberian ideal-type typology of different categories or types of development projects, scholars should consider various dimensions along which projects can be classified. By making use of a literature review and content analysis, the purpose of this article is to propose a conceptual typology of development projects by merging dimensions of development and project management in a government setting. The proposed typology comprises 13 categories and serves as a framework to guide scholars, policymakers, and practitioners to gain a more comprehensive and nuanced understanding of government development projects.

INTRODUCTION

In the ever-evolving landscape of socio-economic development, the complexities of addressing diverse social, economic, and environmental challenges demand innovative and nuanced government solutions. In this regard development projects have proliferated across the globe, seeking to improve the lives of individuals, communities, and nations. Development projects serve as valuable instruments for government to bring about positive change towards the well-being and general prosperity of citizens.

Development projects are central to international development efforts by translating development goals into more sustainable outcomes and socio-economic impact (Belcher and Palenberg 2018; Heeks and Stanforth 2014). Development projects increasingly attract scholarly attention (Belcher *et al.* 2019; Bore and Odeku 2022; Hudon and Floricel 2023; Scheidel *et al.* 2023; Williams 2017). However, an analysis of their scope and nature has been hampered by confusing and inconsistent terminology and a lack of a classification system or scheme to make provision for the multidimensional and multidisciplinary nature thereof (Burkhardt-Holm and Zehnder 2018). In this regard Heeks and Stanforth (2014) and Struyk (2007) maintain that scholarly inquiry into development projects is significantly constrained by terminological ambiguity and poorly defined terms. Development projects therefore remain relatively under-researched, hampering knowledge-construction efforts and social progress. Thus, there emerges a need to design a typology for development projects to facilitate scholarly inquiry, while simultaneously demarcating the interwoven interdisciplinary perspectives that seek to unravel the intricate web of development and project management. The rationale to craft a conceptual typology for development projects emerges from the realisation that while the scope and scale of such projects have expanded dramatically, the means by which scholars study and evaluate them has not kept pace. This oversight risks reductionism and a fragmented understanding of development initiatives, and furthermore limits the ability to derive comprehensive insights from diverse disciplinary perspectives in the design and execution of government projects.

The purpose of this article is to propose a multidimensional conceptual typology for development projects in government. The suggested typology has 13 elements. To realise this purpose, this article takes the following design. It first elucidates the use of typologies in scholarly inquiry and then conceptualises and contextualises development projects. The article then outlines the methodological steps followed towards designing a conceptual typology, and concludes by outlining the proposed themes (types) for the classification system of development projects. The typology presented here is structured linearly according to the generic phases of development project life cycles. The typology is subject to constant modifications and refinement. As such, it should be regarded as scholarly work in progress.

THE SIGNIFICANCE OF TYPOLOGIES
IN SCHOLARLY INQUIRY

Typologies or classification schemes "confer organisation and stability on our thoughts about reality" (Marradi 1990:147). In the social sciences, a typology refers to the multidimensional classification of concepts, entities (cases), or phenomena into distinct types or categories based on shared characteristics or attributes. It usually involves defining an object field and then categorising these objects according to particular dividing attributes, known formally as *fundamenta divisionis*. Mandara (2003) and Stapley, O'Keeffe and Midgley (2022) maintain that a typology is formed by grouping objects or phenomena on the basis of common features, with consideration of how each unique object or phenomena represents a particular pattern of features. Nind and Lewthwaite (2020:467) view a typology as an "analytical tool", while Bailey (1994:1) argues that "without proper classification of complex phenomena, there could be no advanced conceptualisation, reasoning, language, data analysis or, for that matter, social science research". Bailey (1994:33) further adds that "a well-constructed typology can be very effective in bringing order out of chaos … A sound typology forms a solid foundation for both theorizing and empirical research. Perhaps no other tool has such power to simplify life for the social scientist". It thus facilitates the unpacking of a complex issue in a structured manner based on its unique properties or dimensions. Similarly, Lehnert (2007:62) regards a typology as "an instrument of social science in that it serves as conceptual tools to simplify and order complex social phenomena".

A related term to typology is "taxonomy", which refers to the theoretical study of classification systems (Babbie 2010). An important function of a taxonomy is to serve as a criterion for comparative purposes for the study of other types of phenomena or cases. To this, Alach (2017:61) adds that the specific functions of typology constructions are to:

- develop a coherent conceptual structure;
- define terminology within that coherent conceptual structure;
- minimise overlaps between different elements of the conceptual structure;
- borrow elements from the existing literature where possible, to enhance understanding and build on analysis already conducted; and
- enable all related phenomena to be classified.

Further to these functions, Collier, LaPorte and Seawright (2012:217) argue that typologies are useful to "explore dimensionality". Lehnert (2007:63) holds that a large number of different types and typologies reflects this dimensionality by offering different constructions, content and purposes: real types, ideal types, empirical types, constructed types and extreme types. Collier, LaPorte and Seawright

(2012:217), Lehnert (2007:63) and Stapley, O'Keeffe and Midgley (2022:2) differentiate between the following kinds of typologies to explore dimensionality:

- Explanatory typologies, in which the cell types are the outcomes to be explained and the rows and columns are the explanatory variables.
- Multidimensional typologies, which capture multiple dimensions and are constructed by cross-tabulating two or more variables.
- Unidimensional typologies that are organised around a single variable.
- Conceptual or descriptive typologies, explicating the meaning of a concept by mapping out its dimensions.
- Ideal and real types that are deductively derived constructions, or Weberian "mental images", rather than empirical observations, developed by isolating and combining into a coherent whole the crucial aspects of a phenomenon.
- Empirical types that are derived from data analysis without prior conceptualisation.

As far as the latter, empirical types are concerned, they generally aim to capture the diversity and complexity of social phenomena by identifying patterns in data. These types are derived from real-world observations, measurements, or experiences, rather than being solely theoretical constructs. In contrast, conceptual typologies, the focus of this article, have a strong heuristic focus and allows for a descriptive and structured approach to facilitate the identification of patterns, trends, and relationships between variables. As such, conceptual typologies routinely constitute the independent, intervening, and dependent variables in social science research. Collier, LaPorte and Seawright (2012:222) propose that the construction of conceptual typologies follow four interconnected steps, namely (a) clarifying and defining concepts and constructs, (b) determining the connection between these meanings, (c) situating the concepts within their semantic field, and (d) identifying and refining the hierarchical relations between concepts.

It is important to note that, while conceptual typologies offer valuable heuristic functions, they are not without limitations. Researchers should be mindful of the potential for reductionism, oversimplification, the fluid nature of social phenomena, and the need for ongoing refinement and adaptation of typologies based on new evidence and insights (Bornmann and Marewski 2019; Cash-Gibson *et al*. 2020; Sovacool and Hess 2017).

The need for typologies of government development projects

Development projects, as studied from an academic perspective, are complex, purpose-driven endeavours aimed at bringing about positive social change (McMichael 2008; Mensah 2019). They offer a rich field for academic inquiry,

with the potential to shape policies, practices, and the broader understanding of development challenges and opportunities (Hudon and Floricel 2023).

Distinguishing between different categories (i.e. typologies) of development projects is crucial from a scholarly or academic research point of view for several reasons. The first reason is that it establishes clarity and research focus on specific types of projects, allowing for in-depth and meaningful analysis. Without clear categories, research might lack direction and could become overly broad in scope. Categories help formulate focused research questions that are relevant to a specific type of development project (Niknazar and Bourgault 2017). Researchers can tailor their inquiries to address the unique characteristics, goals, and challenges of each category. Second, it enables comparative analysis of different types of development projects thereby facilitating the identification of best practices, common challenges, and trends. Researchers can select specific projects within each category as case studies to delve deeply into their dynamics, challenges, and outcomes. Third, it assists project champions such as governments, international development agencies, and donor organisations to evaluate the effectiveness of different types of development projects. Categorisation allows for structured evaluations of development projects and aids the identification of success factors or areas in need of improvement. As such, it also informs government policies, strategies and programmes directed towards development. Research on development projects can inform government policymakers, helping them design and implement effective development policies and strategies. Scholars often analyse the policy implications of project outcomes and offer recommendations. Fourth, it allows researchers to consider the unique social, economic, political, and environmental contexts in which development projects operate. Understanding these contextual factors is essential for project success and academic analysis. Lessons learned from previous projects can inform the design and implementation of future initiatives. It assists scholars with the development and testing of theories related to specific categories of development projects. This can lead to a deeper understanding of the dynamics at play within those categories. This may enable the outcome and impact assessment of different categories of development projects by identifying suitable criteria to measure success in each category. Finally, it facilitates inter- and multidisciplinary collaboration between researchers by obtaining knowledge and expertise for the successful planning and implementation of development projects. Scholars can draw on fields such as economics, sociology, public policy, public administration, environmental science, and more, allowing for a holistic understanding of development challenges and solutions. Focused, multidisciplinary research teams can work on particular types of development projects to gain holistic perspectives.

It is evident that categorising development projects is essential for academic research as it enables a more organised, focused, and systematic approach to studying the diverse landscape of development initiatives. Such categorisation

serves as a foundational framework for research design, analysis, and the generation of knowledge that can contribute to more effective and informed development policies and practices.

DEVELOPMENT PROJECTS CONTEXTUALISED AND CONCEPTUALISED

The notion of "development projects" implies that projects are utilised for purposes of development. Both concepts "development" and "projects" are multidimensional in nature and a brief exposition of their meanings is required to merge these two fields by means of a conceptual typology.

Development

Focus on development became especially prominent during the 1950s and 1960s. During this period, development was commonly associated with economic growth focused on wealth creation, rather than change in society (Klarin 2018; Mondini 2019). Development is, however, a complex concept that goes beyond economic growth and encompasses various aspects of human well-being and societal progress (Ruggeri *et al.* 2020). It involves positive changes in different dimensions, aiming to enhance the quality of life for individuals and communities. The main dimensions of development are often categorised into economic (profit), social (people), and environmental (planet) aspects (Coccia 2019).

The economic dimension is generally associated with an increase in per capita income and overall wealth within a society (Todaro and Smith 2006). This involves the growth of the economy, increased productivity, the creation of employment opportunities, infrastructure development, and industrialisation (Zhange and Tala 2016). Beyond material wealth, development seeks to enhance the overall quality of life, encompassing factors like personal security, leisure, and a sense of belonging.

The social dimension includes aspects such as education, healthcare services, social inclusion, and equity (Szirmai 2005). The political and legal dimensions of development are usually dealt with as part of the social dimensions and include effective governance, the rule of law, political stability, and strong institutions. Political stability and peace contribute to an environment conducive to sustained growth and progress (Vincent 2004). The political dimension also includes social cohesion, human rights, transparent and accountable government structures, legal frameworks, and mechanisms for citizen participation.

The environmental dimension refers to the sustainable utilisation of natural resources, the minimisation of environmental degradation, and addressing climate

change concerns. It also includes protecting biodiversity and ecosystems as an integral part of sustainable development, recognising the interconnectedness of environmental health and human well-being.

Steady progress in these three dimensions collectively contributes to the well-being and sustainable advancement of individuals and societies. Governments have moral obligations and a constitutional and legal mandate to pursue development that can be sustained without having a detrimental impact on people and the environment.

Projects and project management

The practice of project management can be traced back to ancient times but contemporary conceptions of project management only emerged in the 1950s in the US military, which developed concepts and techniques such as work breakdown structure (WBS) and programme evaluation and review techniques (PERT) (Abbasi and Jaafari 2018; Van der Waldt and Kariuki 2023). The development of tools and techniques, such as the critical path method (CPM) and PERT has been seen as the starting point for the modern project management, which was initiated by defence and construction industries (Turner, Anbari and Bredillet 2013). Later, professional organisations such as PMI (in 1969), APM, AIPM, and IPMA were formed, which heralded a new era to develop bodies of knowledge (Zerjav 2021).

Governments increasingly utilise projects as vehicles to operationalise national legislation by converting it into actionable programmes and projects (Van der Waldt and Kariuki 2023). These are ad hoc initiatives or undertakings that are planned, funded, and executed by government departments, agencies, and entities at local, provincial, or national spheres. These projects generally aim to address societal needs, improve infrastructure, deliver public services, and promote the overall well-being of citizens. Government projects can span a wide range of sectors, including transportation, healthcare, education, infrastructure, social services, and technology. As the competency, capacity and ability of governments to design and execute projects mature, suitable organisational arrangements, political oversight and control mechanisms, resource allocation and utilisation, and methodologies are established to ensure the success of similar projects in future (Van der Waldt 2020).

The life cycle of a project refers to the series of generic phases or stages that a project goes through from initiation to completion (see Figure 1). The project life cycle provides a structured framework for planning, executing, and managing projects (Aaltonen and Kujala 2010). While specific terminology and the number of phases may vary, a common project life cycle includes the following key stages:
■ Initiation, to define the project's objectives, scope, and purpose.

Figure 1: Project life cycle phases
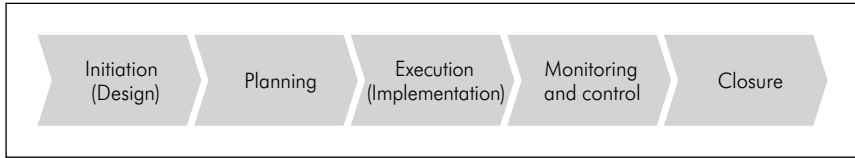
- Planning, to define the project scope, including scheduled deliverables, milestones, and constraints.
- Execution, to implement the project plan by carrying out the activities and tasks outlined in the project plan, monitor progress, and manage resources.
- Monitoring and controlling, to track project progress against the schedule and budget and to identify and address any issues or deviations from the project plan promptly.
- Closing, to ensure all project deliverables are completed according to specifications and accepted by the target beneficiaries.

The life cycle is a flexible framework, and variations may occur based on the project's nature, industry involved, and organisational practices (Brunet, Fachin and Langley 2021). Project managers use the life cycle to guide decision-making, allocate resources effectively, and ensure successful project outcomes (Priemus, Flyvbjerg and Wee 2008).

Development projects

Merging the domains of development and project management, development projects refer to purposeful, planned interventions or initiatives aimed at bringing about positive change, progress, or improvement in various aspects of society, the economy, or the environment. These projects are typically designed to address specific social, economic, environmental, or infrastructural challenges and contribute to the overall progress and well-being of the targeted population. These projects are typically carried out with specific objectives, resources, and strategies to address challenges, meet needs, and achieve development goals (Moreno-Monsalve *et al.* 2023).

In an era of globalisation and interconnectedness, development projects span the spectrum from grassroots community efforts to large-scale, multi-sector, cross-border interventions (Golini and Landoni 2014). They encompass objectives that range from poverty alleviation and health improvement to infrastructure development and environmental sustainability. The actors involved in these initiatives vary from local communities to governments, from non-governmental organisations

(NGOs) to multinational corporations. Broadly speaking, development projects can thus be initiated by several actors involved in socio-economic development, such as:

- government on all spheres and tiers to operationalise national legislation, developmental policies, strategies and programmes inclusive of infrastructure development initiatives;
- international and regional development aid, support and donor agencies;
- private-sector enterprises and businesses, mainly to comply with corporate social responsibility requirements; and
- NGOs, community-based organisations, local communities, and individuals.

This categorisation of actors should make provision for permutations or combinations of actors involved. For example, communities may initiate a development project and then request the local authority to champion the project by providing the necessary expertise, resources and support. A further example is where a donor aid agency establishes a project but then utilises the local footprint of national governments to distribute the aid, provide financial reporting and conduct the overall administration of the project.

Stojanović, Ateljević and Stević (2016) maintain that government's role is paramount to realise the targets set in terms of the United Nation's Sustainable Development Goals (SDGs) (2015). As such, governments should initiate and drive (i.e. champion) projects aimed at realising national and local development objectives. These objectives are typically aimed at creating lasting positive changes in society by addressing specific development challenges or opportunities, such as poverty reduction, healthcare improvement, environmental sustainability, or economic growth. Therefore, sustainability considerations are crucial. This involves ensuring that the benefits of the project continue beyond its initial implementation and that local communities are equipped to maintain and build upon the improvements achieved.

Development projects involve systematic planning and design, where stakeholders identify the scope, objectives, target beneficiaries, and the strategies required to achieve the desired outcomes (Dick-Sagoe *et al.* 2023; Yang 2014). These projects demand close stakeholder involvement and are usually resource intensive, requiring the allocation of various resources, including financial, human, and material resources. As such, development projects are usually far more complex than ordinary organisational (e.g. government departmental) projects because they involve engaging with marginalised communities, balancing competing interests, and addressing long-term social and environmental outcomes.

It should be noted that national government development projects are usually derived from international, continental, and regional development initiatives, treaties, conventions and protocols. Figure 2 reflects the cascading nature of these projects.

Figure 2: Cascading nature of government development projects

Global
development frameworks

Continental
development frameworks

National
development planning and
programmes

Local government
development planning and projects

Community
development
projects
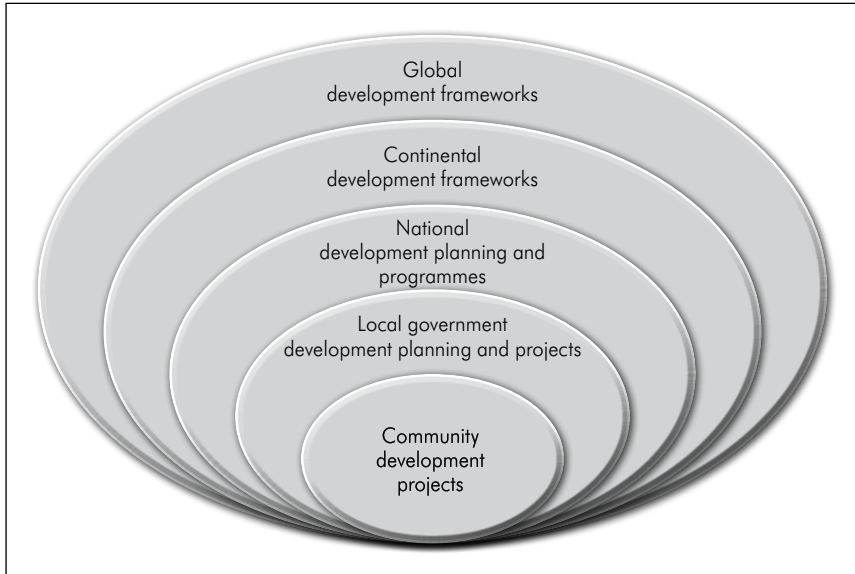
From a global development perspective, the SDGs act as an overarching framework by setting 17 goals as part of the 2030 Agenda for Sustainable Development. Development projects have a crucial role to play in operationalising the SDGs.

As far as a continental perspective is concerned, frameworks such as the European Consensus on Development (EU 2017) and Africa Agenda 2063 (AU 2013) act as strategic development frameworks for socio-economic progress. It is expected that member countries on the continent align their national development agendas and projects with these continental projects.

Regional perspectives to development projects refer to regional organisations such as the Southern African Development Community (SADC) that promote socio-economic development and integration in regions. It is expected that individual countries in the region adhere to these initiatives by bringing them in line with national development plans and strategies.

In South Africa, the National Development Plan: Vision 2030 outlines a long-term development blueprint for the country. It serves as an overarching framework for targeted development initiatives such as the National Infrastructure Plan and the National Climate Change Response Policy. These policy frameworks and strategies provide a roadmap for South Africa's national development agenda. In provinces, development projects are guided by Provincial Growth and Development Plans. These are long-term strategic plans developed by

South African provincial governments to guide economic growth and development in their respective provinces. Municipalities located within provinces are responsible for development projects aligned with the integrated development plans, service delivery and budget implementation plans, and local economic development strategies.

As a unique branch of development projects, community development projects can be regarded as focused initiatives aimed at improving the social, economic, and environmental conditions of a specific community or group of communities. These projects typically involve active participation from community members and are designed to address the unique needs and challenges faced by a community (Van der Waldt 2019). What makes community development projects unique is the fact that projects are usually tailored to the specific circumstances, needs, aspirations, and cultural context of communities. A further peculiar aspect of community development projects is that they generally involve close collaboration between government agencies, community-based organisations, non-profit organisations, local leaders, and community members to ensure sustainable development and positive impact in targeted communities (Kemp, Parto and Gibson 2005).

According to Yusuf, Adekunmi and Ayanda (2020:139), a "bottom-top or participatory approach to community development interventions is indispensable to the success and sustainability of any project". To this, Obar, Adekoya and Nkwocha (2017:27) add that if community members take ownership of projects and perceive these projects as legitimate means to improve their well-being and promote their prospects, development interventions are usually sustainable. The sustainability of community development projects further implies that community members partake in decisions regarding project delivery modalities, assist in the mobilisations of resources, motivate others to join, and offer their local knowledge, skills and expertise (*ibid.*).

Banks, Shevellar and Narayanan (2023:1) reason that community development projects should be "value-based", meaning that projects should be "underpinned and infused by community values". These values should promote "participative democracy, sustainable development, human rights, economic opportunity, equality and social justice" (*ibid.*).

From the perspectives outlined above, it is evident that national government development projects should be fully aligned and coordinated on all spheres of government and that they should also be closely associated with regional, continental and global development initiatives.

In the multifaceted world of international development, the need to design a comprehensive typology for development projects cannot be overstated. As the global landscape continues to evolve, the challenges that development initiatives seek to address grow in complexity and urgency. The diverse array of projects, stakeholders, and objectives demands a unifying framework that not only focuses

scholarly inquiry but also demarcates disciplinary perspectives, fostering collaboration and holistic problem-solving.

METHODOLOGY

The construction of conceptual typologies is exploratory in nature and usually follows a thematic analysis approach with the aim of deriving themes from an extensive literature review (Fereday and Muir-Cochrane 2006; Mohajan 2018). To identify potential classification schemes for government development projects, a search for full-text articles with the combination of subjects (i.e. titles and keywords) of "government", "development", "projects" and "typology" was conducted using Google Scholar, Academia.edu, and ResearchGate.net. Results were then examined for value and relevance, with those regarded as most suitable for the purpose of this analysis. The total number of articles initially identified as relevant was 76 ($n=76$). The eventual sample that was subjected to deeper analysis was 45 scholarly articles ($n=45$).

Qualitative content analysis was used to interpret these articles. Content analysis is a research method widely used in the social sciences to systematically analyse the content of various forms of communication, such as written, verbal, or visual materials (Bengtsson 2016:8). The primary goal of content analysis is to identify and quantify patterns and relationships within the data, providing valuable insights into the nature and characteristics of the communication being studied (Kleinheksel *et al.* 2020). Themes were identified based on the content of the articles (i.e. concepts, cases and applications). These themes led to the categorisation of development projects.

PROPOSED CONCEPTUAL TYPOLOGY FOR GOVERNMENT DEVELOPMENT PROJECTS

Based on the thematic review of the content, 13 major classification schemes were identified. These classifications were then grouped per project life cycle phase to establish a more structured and linear approach in analysing the dimensions thereof. The analysis of the sampled articles included the nature of existing typologies or classification schemes. Only three examples of such typologies could be found, namely Crawford, Hobbs and Turner (2002), Dvir *et al.* (1998) and Evaristo and Van Fenema's (1999) typologies, referring to (a) single versus multiple projects; (b) the number of sites that these projects encompass; and (c) the project size, relating to cost, duration, teams, and number of departments involved. These typologies were incorporated in the proposed classification system presented in Table 1.

Table 1: Typology for government development projects

Life cycle phase	Typo-logy	Connected types (descriptors in brackets)
Initiation	Geographically based	■ Local projects (confined to a specific locality, town, or village, addressing local development needs and concerns) ■ Regional projects (encompassing a larger geographic area, e.g., province, often spanning several cities or districts) ■ National projects (undertaken at the national level, benefiting the entire country) ■ Cross-border and transnational projects (involving coordination and collaboration across multiple countries to address regional development challenges) ■ International or global projects (with cross-border implications or addressing global development issues)
	Time-based (duration)	■ Short-term development projects (typically completed within a year or two, often focusing on immediate needs or crisis response) ■ Medium-term development projects (spanning a few years and aiming for sustained impact) ■ Long-term development projects (may extend over longer periods, addressing complex, persistent development concerns such as poverty reduction or environmental conservation).
	Type-based	■ Policy (projects utilised to execute national legislation for service delivery and projects used to comply with statutory requirements) ■ Strategic (typically aligned with broader national policy and government development programmes) ■ Ad hoc (single intervention projects) ■ Maintenance (for the maintenance of government infrastructure and assets) ■ Upgrade (to improve existing government systems, processes and functions) ■ Operational (ongoing, routine projects)
	Funding-source-based	■ Publicly funded (financed by government budgets, often from tax revenues or external loans) ■ Crowd-funded (financed by the public via social media) ■ Privately funded (financed by private companies, philanthropists, or investors) ■ Multilateral funded (contributions from multiple governments and international development agencies) ■ Donor funded (funded by international donor agencies) ■ Development agency funded (funded by development aid agencies)
	Funding-size-based	■ Mega projects (total project cost of at least R900m) ■ Large projects (cost between R50m and R300m p/a totalling at least R150m but less than R900m) ■ Small projects (cost less than R50 million p/a and not more than R150m) (National Treasury 2010)

Life cycle phase	Typo-logy	Connected types (descriptors in brackets)
Planning	Scale-based	■ Small-scale projects (typically involving limited resources and a narrow focus, addressing specific, localised development issues) ■ Medium-scale projects (having a broader scope and often affecting multiple communities or regions) ■ Large-scale mega projects (major initiatives with a national or international development impact, often requiring substantial resources and long-term commitment) ■ Multi-sectoral projects (combining efforts from various sectors to address complex development issues comprehensively)
	Purpose-based	■ Social development (aimed at enhancing social well-being, including healthcare, education, and social welfare) ■ Environmental sustainability (projects with a primary goal of preserving the environment) ■ Poverty alleviation (aimed at improving living conditions, income levels, and access to basic needs in impoverished areas) ■ Economic development (focused on improving economic indicators, such as GDP growth, job creation, and poverty reduction) ■ Infrastructure development (dedicated to building or upgrading physical infrastructure) ■ Disaster, crisis response, or humanitarian aid (projects intended to address emergency situations, such as natural disasters or conflicts, preparing communities for potential crises, including natural disasters, pandemics, and economic shocks) ■ Youth development (targeting the needs and aspirations of young people, including education, employment, and civic engagement)
	Approach-based	■ Urban and rural development projects (requiring focused approaches to address the peculiar nature of development in each area) ■ Community-based development projects (empowering local communities by involving them in development decision-making and implementation processes) ■ Market-oriented development projects (emphasising market-driven solutions and private-sector involvement to stimulate economic development)
	Champion-based (project driver)	■ Government-initiated and led projects (initiated and funded by government institutions, entities and agencies at various spheres and tiers of government) ■ Public–private partnerships (driven by private businesses in collaboration with the public sector) ■ Non-governmental organisations (led by non-profit organisations with social or environmental development missions) ■ International organisations (supported and coordinated by international bodies like the United Nations, International Monetary Fund, Development Bank or World Bank) ■ Community-led (development initiatives initiated and managed by local communities themselves)

Life cycle phase	Typo-logy	Connected types (descriptors in brackets)
Execution	Sectoral-based (government sectors, closely related to the purpose-based typology)	*Economic development:* ■ Infrastructure development (inclusive of physical, transportation, utilities, and telecommunications infrastructure) ■ Industrial and manufacturing (aimed at promoting economic growth through the establishment or expansion of manufacturing and industrial facilities) ■ Agricultural development (designed to improve agricultural practices, increase crop yields, and enhance food security) ■ Services and technology (supporting the service sector and technological advancements) ■ Tourism (designed to boost income generated from tourism) ■ Financial services (related to the financial sector, including microfinance and banking services)
		Social development: ■ Healthcare (related to the construction and improvement of hospitals, clinics, and public health programmes) ■ Education and skills development (supporting educational institutions, vocational training, and adult literacy programmes) ■ Social welfare (focused on poverty alleviation, providing social safety nets, and improving living conditions for marginalised communities)
		Environmental sustainability: ■ Renewable energy (projects for the development of renewable energy sources like solar, wind, and hydroelectric power) ■ Environmental conservation (projects to protect natural ecosystems, biodiversity, and reduce the impact of human activities on the environment) ■ Waste management, pollution control, and recycling (projects aimed at waste disposal, pollution reduction, and recycling)
		Agricultural and rural development: ■ Agricultural extension (support for farmers in adopting modern and sustainable farming practices) ■ Irrigation (construction of irrigation systems to enhance agricultural productivity) ■ Rural electrification (expanding access to electricity in rural areas)
		Urban and regional development: ■ Smart cities and urban planning (promoting sustainable urban growth, efficient transportation, and the use of technology for improved city living) ■ Housing and slum upgrading (focused on providing affordable housing and improved living conditions in informal settlements) ■ Urban renewal and redevelopment (transforming blighted or underdeveloped areas within cities) ■ Regional economic development (stimulating economic growth in specific regions) ■ Heritage and cultural preservation (aimed at preserving and restoring historical and cultural landmarks within cities)
		Technology and innovation projects: ■ Information technology and connectivity (initiatives that promote access to the internet and digital technology, especially in remote and underserved areas) ■ Innovation hubs and incubators (projects supporting innovation, entrepreneurship, and small business development) ■ Research and development (focused on scientific research, technological advancements, and knowledge creation)

Life cycle phase	Typo-logy	Connected types (descriptors in brackets)
Execution	Sectoral-based (government sectors, closely related to the purpose-based typology)	*Tourism and cultural development:* ■ Tourism promotion (designed to develop tourism infrastructure, market destinations, and preserve cultural heritage) ■ Arts and culture promotion (initiatives supporting arts, cultural events, and the preservation of cultural traditions) ■ Historical site restoration (preservation of historical landmarks and cultural heritage) *Public safety and security:* ■ Law enforcement and police infrastructure (construction and maintenance of police stations and facilities) ■ Peacekeeping and conflict resolution (participation in peacekeeping missions and conflict resolution efforts) ■ Disaster management and response (projects to prepare for and respond to natural and human-made disasters)
	Methodology-based	■ Linear methodology (e.g. Waterfall and PMBOK) ■ Agile methodology (e.g. Scrum, Lean, and Xtreme) ■ Off-the-shelf methodology (e.g. PRINCE2, Kanban, and Six Sigma) ■ Purposively designed methodology (novel, in-house developed) ■ Hybrid methodology (combination of the other types)
Monitoring and control	Performance and quality-based	■ Timeline adherence ■ Monitoring and evaluation systems ■ Budget compliance ■ Scope management ■ Client/stakeholder satisfaction ■ Development issue resolution ■ Risk mitigation ■ Contingency planning. ■ Stakeholder collaboration ■ Knowledge sharing and transferability to targeted communities ■ Quality assurance and compliance with standards and metrics ■ Reporting and documentation ■ Performance auditing ■ Feedback loops

Life cycle phase	Typo-logy	Connected types (descriptors in brackets)
Closure	Outcome-based	■ Short-term development outcomes (e.g. completion of project deliverables, adoption rates of developed solution, and satisfaction of immediate stakeholders) ■ Intermediate development outcomes (e.g. behavioural changes resulting in improved development outcomes such as consumption patterns, smaller carbon footprints, and greener energy) ■ Long-term outcomes (e.g. the long-term viability and sustainability of project outcomes, the level of institutionalisation, and policy outcomes)
	Impact-based	■ Social and economic impact (e.g. employment generation, income generation, social cohesion and social inclusion) ■ Environmental impact (e.g. resource conservation and environmental sustainability) ■ Health and well-being impact (e.g. health indicators, access to healthcare services, enhancements in the overall quality of life of project beneficiaries) ■ Educational impact (e.g. knowledge transfer and educational attainment) ■ Cultural impact (e.g. cultural preservation, heritage, and social bonds) ■ Innovation and technology impact (e.g. technology uptake and innovation ecosystem) ■ National, regional and global impact (e.g. cross-border collaboration and global relevance) ■ Policy impact (e.g. adjustment of national legislation and government policies and praxis)

Source: (Author's own compilation)

These categories provide a comprehensive framework for analysing the diverse landscape of development projects. In practice, development projects may span multiple categories, and their classification may evolve over time as their objectives and impacts change. This reflects the multidimensional nature of these types of projects. The typology is therefore not exhaustive.

The design of a typology for government development projects serves as a valuable tool for scholars engaged in the critical examination of government's development initiatives, inclusive of public policies, strategies and programmes. It empowers researchers to navigate the complexities of government projects, fostering a nuanced understanding that can inform better practices, policies, and governance structures for sustainable development. The proposed typology enables researchers in study fields such as Public Administration and Management, Project Management and Development Studies to identify deviations or anomalies within categories, helping to refine or modify existing typologies. This iterative process contributes to the ongoing development of knowledge in the social sciences in general and these study fields in particular. As such, typologies can be regarded as work in progress and are constantly subject to modification and refinement.

CONCLUSION

The typology proposed in this article serves as a modest step towards the development of a more coherent theoretical foundation for scholarly inquiry into

development projects. The benefits of creating such a framework are that it serves as a common lexicon upon which much more sophisticated empirical studies can be built. It should be emphasised that the creation of a development project typology is not a mere academic exercise; it is a practical imperative. Such a typology has the potential to enhance understanding of development initiatives, offering a structured lens through which to analyse, evaluate, and compare projects from various sectors and governance contexts. It can help government project practitioners and policymakers make more informed decisions, allocate resources more efficiently, and adapt strategies to evolving challenges. Moreover, the typology proposed goes beyond a mere classification system; it is a catalyst for intellectual exchange and innovation. It encourages scholars from diverse disciplines to work in tandem, acknowledging that the world's most pressing development problems demand integrated solutions. Interdisciplinary collaboration, facilitated by the typology, can lead to transformative discoveries and new paradigms in development theory and practice. Such endeavours are rooted in the conviction that by categorising and classifying development projects according to their key attributes, scholars can harness a more profound understanding of their impact, challenges, and potential synergies.

The diversity within the realm of government development projects is undeniable, reflecting the multifaceted nature of the challenges they aim to address. As the world grapples with the urgency of achieving sustainable development goals, social equity, environmental protection, and economic growth, it is clear that development projects play a central role. The creation of a development project typology represents a crucial step towards harnessing the full potential of these initiatives, and, ultimately, towards realising a more equitable and sustainable global future.

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Governance and Organisational Culture in Implementing Food Security Programmes in Rural South Africa

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ABSTRACT

This article examines food security programmes in rural South Africa, where poverty widens the gap between policy intent and execution. It focuses on the complexities of these programmes to bridge the policy and practice gap. The article is based on a qualitative approach by way of a case study, documentary analysis and interviews. A key finding is the significant influence of organisational culture on programme effectiveness. The balance between centralisation and decentralisation is crucial, as policy formulation often comes before successful execution in the country. While centralisation can address procurement issues, its success depends on understanding the unique needs of impoverished farmers. Rural districts face obstacles beyond logistics, such as political interference, operational inefficiencies, and a one-size-fits-all approach. To enhance policy implementation, the research highlights the importance of fostering an organisational culture that prioritises adaptability and continuous learning, offering a solution to South Africa's persistent policy implementation problem.

INTRODUCTION AND BACKGROUND

The Food and Agriculture Organisation (FAO), International Fund for Agricultural Development (IFAD), and the World Food Programme (WFP) (2015:53) provide

a comprehensive definition of food security. It encompasses four aspects: food access, availability, utilisation, and stability. They define food security as: "A situation in which all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, IFAD & WFP 2015:53). All four elements must be considered when examining the food value chain, and this research adopted the same definition.

Food security is imperative in South Africa, especially given the nation's diverse socio-economic landscape. The contrasts between urban and rural settings are stark, with each presenting unique challenges. While urban areas face issues related to rapid urbanisation, infrastructure deficits, and the informal food economy, rural areas grapple with limited access to markets, declining agricultural yields, and vulnerabilities tied to economic conditions and climate change. Food security remains a significant global challenge due to, among others, the state of the economy, declining agricultural production, rising population, and climate change (Pereira and Drimie 2016; Igbinedion and Aihie 2015; Candel 2013).

South Africa has implemented strategies to bolster food security (Petersen & Charman 2018). Noteworthy interventions include subsidies for small-scale farmers, community-based agricultural programmes, and initiatives to promote urban farming. Ngumbela, Khalema and Nzimakwe (2020) believe that job creation and agricultural productivity best address food insecurity in rural areas at household and individual levels. Despite considerable investments, the tangible impact of these interventions on improving the food security status of the most vulnerable groups remains limited. This underscores the urgency to reassess the mechanisms governing these policies and their execution.

Numerous studies have shed light on the intricate relationship between governance and the effective implementation of food security policies. The tenets of good governance, encompassing aspects like accountability, stability, and active citizenry, have been highlighted as essential (Margulis and Duncan 2016; Mubangizi 2013). However, a conspicuous gap exists in understanding how organisational culture influences the operationalisation of food security programmes. While organisational culture dictates structures and practices (Berthod 2016), its specific impact on food security remains understudied.

Given this context, a pertinent question arises: How does the interplay between governance, responsiveness, coordination, and organisational culture influence the implementation and effectiveness of food security programmes in South African municipalities, particularly in the rural context? This article seeks to bridge the aforementioned knowledge gap by critically analysing the role of organisational culture in the effective deployment of food security initiatives in a select district municipality. In doing so, it offers nuanced insights that could reshape policy considerations and guide more effective programme implementation.

Furthermore, the study's findings have profound implications for policymakers, offering tangible recommendations rooted in a deeper understanding of the organisational dynamics enhancing the potential for more successful food security interventions.

FOOD SECURITY AND RURALITY

The General Household survey (2018) found that a quarter of the South African population experienced financial constraints leading to food shortages. Despite being considered food secure nationally, data reveals significant food insecurity in mainly rural households in South Africa (Ngema *et al*. 2018).

The Eastern Cape (EC) province, characterised by poverty disparities based on rural location, race, and gender, faces persistent food security challenges (Ngumbela, Khalema & Nzimakwe 2020). Lack of knowledge in programme implementation, complexities in organising, planning, monitoring, and assessing food security programmes, and limited awareness of policy contexts contribute to the problem. Despite more than a decade of democracy, the EC province remains trapped in structural poverty (Ngumbela *et al*. 2020). South Africa's food security issue persists, with mainly commercial farmers dominating production (Jarana 2018). The province, including the OR Tambo District Municipality, remains entrenched in structural poverty, and social grants alone are inadequate in addressing food insecurity. Instead, policymakers should consider combining grants with programmes that develop and implement food security projects.

EVOLVING ISSUES REGARDING FOOD SECURITY DISCOURSE IN SOUTH AFRICA

Various studies have examined food security in South Africa. De Cock (2013) found that factors such as district location, human capital, and household income affect food security in Limpopo. Maziya, Mudhara, and Chitja (2017) identified factors such as marital status, household size, income, education, access to credit, and gender as alleviating food insecurity in KwaZulu-Natal. Hendriks (2013) assessed the effectiveness of food security initiatives and recommended better coordination, monitoring, and institutional frameworks. For Mubangizi (2013), locally coordinated domestic food production within the framework of the ideals of good governance will tackle food insecurity in decentralised systems. Lack of planning, institutional arrangements, coordination, and climate change were identified as challenges by Candel (2014), Candel (2017), Hendriks (2014), and Vervoort *et al*. (2014). Candel and Pereira (2017) emphasised the importance

of integrated food security strategies, while Van Oosten *et al.* (2018) cautioned against policy incoherence.

The diverse body of literature reviewed presents insights into South Africa's food security landscape. Synthesising the literature cited, it becomes evident that a multidimensional approach is necessary, one that considers factors spanning from socio-economic determinants to governance principles and coordination mechanisms. As policymakers shape and implement food security policies, they must heed such nuanced findings to pave the way for more effective and sustainable outcomes.

THE NEXUS BETWEEN FOOD SECURITY AND GOOD GOVERNANCE

The FAO recognises the significance of good governance in creating an environment that supports the effective implementation of agricultural policies to enhance food security and sustainable development goals (2011:11). Other researchers concur. Sayeed (2014) investigated good governance in implementing food security programmes among extension workers in KwaZulu-Natal. The study noted a disjuncture between policies, strategic frameworks, and legislative guidelines hindered the effective functioning of extension personnel. According to Candel (2018), governance is crucial in determining food insecurity. Molnar (1999) also shares this view and attributes food insecurity to poorly developed policies and policy implementation. Policies and strategies are part of the governance arrangements of organisations. Effective governance is crucial in addressing food insecurity and creating favourable or unfavourable conditions for equitable access to food (Candel 2018). Decision-making and implementation processes in food policy arenas are vital for improving food security outcomes (Moragues-Faus 2020; Sonnino 2016). In examining the role of political and community oversight in advancing good food security governance in South Africa, Mubangizi and Tshishonga (2013) used discourse analysis and case studies. Their study concluded that political and community oversight was essential to realising good governance in the successful implementation of public policy. Policy implementation flaws often stem from governance processes and organisational weaknesses, leading to the failure of food security efforts. Therefore, fostering principles of good governance is fundamental for food security (Zerbian & de Luis Romero 2023).

The preceding discussion emphasises the importance of suitable governance arrangements, inclusive and integrated approaches, and appropriate structures and procedures for successful food security interventions. Currently, the link between good governance and food security is assumed to be universally applicable, disregarding contextual variations. The study seeks to provide recommendations

for enhancing current policies and governance systems, considering contextual variations in the relationship between good governance and food security.

CONCEPTUAL FRAMEWORK

This study explores governance in the context of three theoretical frameworks, namely institutional theory (KoUe, DiMaggio and Powell 1983; Scott 2008), organisational theory (Simon & March 2006; Simon 2013), and governance theory (Ostrom 2002; Ostrom 2010). The interrelationship between these three theories is illustrated in Figure 1. Examining these theories' variables offers insights into how good governance can be achieved and how it can improve the effectiveness of food security programmes.

The success of food security programmes in rural areas can be influenced by various factors, as revealed by three theories. The institutional theory highlights the significance of organisational culture in shaping behaviour, which can impact the execution of food security programmes. In contrast, organisational theory stresses the importance of coordination, planning, monitoring, and evaluation for successful implementation. Effective coordination aligns all stakeholders with the programme's objectives. Appropriate planning ensures efficient allocation of resources, and monitoring and evaluation facilitate adjustments as necessary. Governance theory recognises three critical variables that impact programme success: performance, accountability, and governance approach. Performance measures the effectiveness, efficiency, and responsiveness of food security programmes. Accountability holds all actors responsible for their actions, and the governance approach, whether centralised or decentralised, affects the success of food security programmes. Consequently, the three theories suggest that a

Figure 1: Conceptual framework for food security governance and programme implementation
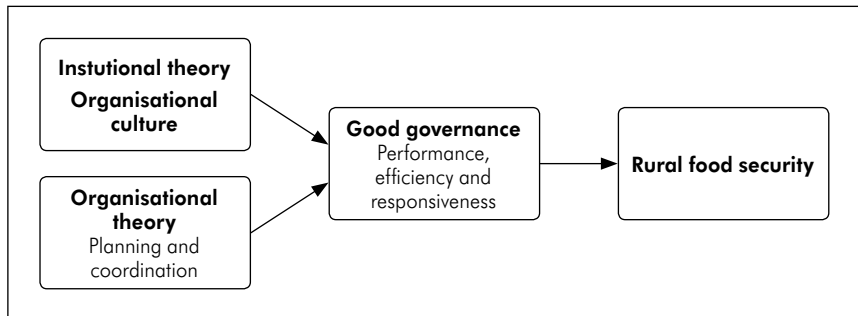
combination of factors, including organisational culture, coordination, planning and governance approach, should be considered when designing and implementing food security programmes in rural areas.

THE STUDY SITE

The study was based in the Oliver Reginald Tambo (ORT) District in the EC province of South Africa. The research setting is selected for it being the poorest district in the province (Iwu *et al.* 2020). The ORT district is predominantly rural, with an estimated population of about 1.5 million (Statistics South Africa 2018). Due to the decentralised nature of policy implementation and in the context of intergovernmental relations, the study was conducted in five district offices of the provincial Department of Rural Development and Agrarian Reform (DRDAR). Beyond this, the study involved local government officials and the Department of Social Development (DSD) officials based in the ORT district purposively selected for their involvement in food security initiatives of the DRDAR and its constituted local municipalities.

THE RESEARCH METHODOLOGY

The study utilised a case study approach to delve into the intricacies of food security governance within the organisational context. Case studies are practical for interpreting and comprehending research problems within specific contexts (Cameron and Price 2009). The authors used a staged approach to sampling within the purposive sampling framework. The study focused on the ORT district, known for being one of the poorest and most food-insecure districts. This allowed for an understanding of the challenges and possibilities in areas with food security issues. The researchers also investigated specific communities within the ORT district that interacted with the DRDAR's food security initiatives. The research included the provincial head office in Bisho to understand the top-down perspective and engaged with local government and DSD officials to get a holistic view. The interviewees were chosen based on their experience and knowledge of the food security programme to ensure valuable perspectives for the study. Table 1 displays the analysis of the study sample and the choice of officials interviewed.

The identities of participants and their respective roles are not revealed to safeguard the identity of the individuals involved in the study. Instead, a designated term, specifically 'respondent' (R), and a numerical identification (e.g. R1) is utilised.

Table 1: Analysis of the study's respondents

Organisation and officials		Respondents
DRDAR	Scientists	6
	Chief Agricultural Development Technicians	6
	Assistant Directors	2
	Agricultural Development Technicians (extension officers)	20
	Chief Directors	2
	Deputy Directors	5
	Control Agricultural Development Technicians	3
Agri-SETA		1
DSD	Deputy Directors	3
	Community Development Practitioner	1
	Assistant Community Development Practitioners	3
Local government officials	Assistant Director	1
	Deputy Directors	3
	Skills Development Facilitator	1
	Community Project Officer	1
Total		58

Source: (Author's own construction)

METHOD OF DATA ANALYSIS

Thematic analysis, chosen for its rigour and flexibility, was utilised for data analysis in this study. The method involved organising and categorising collected data, extracting relevant themes, and ensuring their alignment with the data's meanings (Maguire & Delahunt 2017). This approach facilitated data identification, organisation, analysis, interpretation, description, and reporting. NVivo 12 for Windows was used to enhance the analysis. Extracts from interviews were selected as they represented recurring themes that illustrate elements of the conceptual framework in Figure 1.

RESULTS AND DISCUSSION

The findings of this study highlight the value of organisational performance in terms of governance, responsiveness, and coordination, as well as the role that organisational culture plays in the implementation of food security programmes.

Approach to governance and its impact on food security programmes

Empirical insights from this study underline the undeniable influence of governance structure on the execution of food security programmes. One central finding is the contrasting governance structures; while DRDAR and the DSD manifest a centralised approach, the local government operates in a decentralised fashion.

Direct responses from key informants suggest that the centralised approach, particularly within the DRDAR, fosters challenges in decision-making and communication. This is empirically evidenced by R-1 from the provincial office, who remarked on the tangible disconnect between provincial and district leadership. Such disconnects often culminate in *"frustration and demotivation among policy implementers,"* leading to potential delays and inefficacies in realising policy objectives.

Further cementing the challenges of a top-down approach, Deputy Directors, integral as middle managers within DRDAR, often find their decision-making capacity restrained. An eye-opening statement from a DRDAR respondent, R-2, paints a clear picture: *"Even if we disagree with a decision, we should accept it because it has been made and has been delegated to us".*

Beyond structural concerns, the study also illuminated the ripple effects of organisational culture on implementation. The preference for a centralised decision-making process often leaves lower-level employees feeling marginalised. This sentiment, as reflected in the above response from a DRDAR employee, highlights a clear disconnect between policy decisions and ground-level input, potentially affecting morale and policy efficiency.

Empirically, another shortcoming identified was the generalised approach to food security initiatives. A respondent brought to light a critical oversight: *"Such an approach ignores the importance of soil analysis results and climatic requirements for effective agricultural production inputs".*

By not catering to the unique requirements of individual areas and adopting a one-size-fits-all approach, the overall efficacy of food security programmes might be compromised.

Organisational performance and responsiveness in implementing food security programmes

At the heart of organisational performance lies responsiveness as a pivotal determinant of successful outcomes in food security initiatives. In this study, responsiveness delved into an organisation's adeptness in adapting to shifting scenarios, attuning to local community needs, and forging collaborations to meet programme objectives.

The research findings pinpoint several hurdles to organisational responsiveness in the ORT district's food security endeavours. A recurring theme among respondents was the paucity of resources. A telling response from a local representative, R-3, encapsulates this challenge: "*We are unable to serve all stakeholders because of a staffing shortfall; in one village, 10 employees are responsible for serving 18 wards*". Further compounding this are logistical challenges. Another respondent, R-2, remarked on the dire state of transport, emphasising: "*The shortage of transportation makes it difficult for officials to reach farmers, which has an immediate impact on the delivery of services*". Clearly, the human and logistical resources strain stands out as a major impediment, especially in areas with dense populations or expansive geographical divisions.

Beyond resource challenges, the very fabric of the rural district – its infrastructure– proves a formidable challenge. The condition of roads, described starkly by R-4 as being 'dead,' adds significant layers of complexity to project access. The voice of R-5 underscores another dimension, pointing towards procurement delays that further jeopardise timely farming interventions.

Another discernable trend was the impact of hierarchical decision-making structures. Elaborating on this, R-6 from DRDAR's provincial office highlighted: "*… the supply chain depends on how early we request services and goods and is dependent on the recommendations by several levels of signatories*". The drawn-out decision-making process, necessitating multiple approvals, hampers the organisation's ability to act swiftly and efficiently.

On a brighter note, the findings also shed light on factors bolstering responsiveness. For instance, strategic partnerships with private and civic sectors noticeably lessened the quality and output of DRDAR's efforts. These empirical revelations, drawn directly from those at the forefront of food security programme implementation, underscore the multifaceted nature of challenges and the urgent imperative to address them. As we progress, our policies and strategies must prioritise these tangible insights to elevate organisational performance and responsiveness in rural settings.

Coordination in implementing food security programmes: empirical insights

The linchpin of successful food security programme implementation, particularly in rural settings, is coordination. Through seamless coordination, resources are marshalled efficiently, preventing duplicated efforts and subsequently optimising programme outcomes.

Grounded in the empirical data from the study, four pivotal spheres of coordination emerged as central in the ORT district's food security programme endeavours:

- Coordination with farmers and direct engagement with those at the grassroots, ensuring that interventions are tailored to genuine needs;
- Coordination with partners and collaborating with external stakeholders to augment resources;
- Coordination with suppliers to ensure timely delivery of essential inputs and services to expedite programme execution; and
- Coordination across government levels and drawing resources from varying governmental levels, from local to national.

Notwithstanding its central role, coordination, as evidenced by the respondents' feedback, is fraught with challenges. A salient issue spotlighted was the delayed delivery of inputs. This indicates underlying coordination impediments within both the internal mechanisms of organisations and external service providers. This resonance with previous research, such as Hendriks (2014), underscores the universal nature of such coordination bottlenecks. Furthermore, respondents vividly portrayed the invaluable role of "social facilitation" in ushering in programmes to traditional authorities and other stakeholders. Yet, hurdles persist – be it procedural bottlenecks, such as procurement policies, or organisational issues, like the silo mentality, leading to redundant efforts.

Drawing from the empirical findings, it is clear that meticulous planning, informed by a thorough understanding of internal and external dynamics, is non-negotiable. Internally, there is a pressing need to introspect organisational culture, available resources, and inherent processes. Simultaneously, an outward gaze, aware of the policy milieu, is important. The DRDAR's annual report (2020) candidly identifies a discord between planning and budgeting – a glaring testament to planning lapses.

Embedded in the voices of respondents, from farmers to administrators, is a clarion call to recalibrate our approach to coordination. To achieve the food security goals in the ORT district municipality, strategies must revolve around the empirical challenges and opportunities illuminated by those at the heart of these initiatives.

Impact of organisational culture on food security programmes

Organisational culture, as the collective values, beliefs, and behaviours within an organisation, undeniably plays a pivotal role in the success or failure of food security programme implementation. Its influence touches everything from individual and group behaviours to decision-making processes and adaptability.

The empirical data illuminated a significant concern: the prevalent sense of exclusion felt by lower-tier employees when it comes to decision-making. The voices of both Community Agricultural Development Team and Agricultural

Development Team members underscored this sentiment. Such exclusion could impede the implementation of food security programmes, as research suggests that employee involvement correlates with improved organisational performance and heightened motivation levels.

The intricate balance between external (customer-driven) and internal (employee-driven) organisational priorities emerged as another crucial aspect. Evidence from a Director at the provincial office alluded to the delicate equilibrium needed between the two, endorsing that neglecting internal elements could indirectly impair external service delivery. The success of food security programmes hinges on maintaining this balance.

The willingness to adapt and innovate can make or break the implementation of food security programmes. The study highlighted the contrasting levels of flexibility between different institutions in the ORT municipality. While some institutions, such as the local government, exuded flexibility, the DRDAR appeared more set, especially concerning the beneficiaries it supports. This flexibility, or lack thereof, can significantly influence these entities' adaptability and innovation capacity, making it paramount to the success of the programmes.

A salient discovery of this research was the discrepancies in following procedures within institutions. For instance, there were instances where select beneficiaries were repeatedly supported, sidelining others. Additionally, political influence often swayed decision-making, leading to potential procedural oversights. These lapses can imperil the success of food security programmes, calling for rigorous compliance with procedures to ensure the programme's accountability and transparency.

The empirical findings of this study underscore the importance of a positive and inclusive organisational culture for the successful implementation of food security programmes in rural settings. Without addressing these cultural aspects, efforts might fall short, rendering initiatives ineffective.

Organisational learning capacity and its impact on food security programmes

As championed by Senge (1990), a learning organisation suggests that organisations must value continuous learning and development to respond to change and enhance overall performance. In exploring this concept in the context of food security programmes, our empirical research sought to understand the extent to which specific organisations embrace this learning culture.

The study revealed organisational openness to assimilating and acting upon new information. However, an evident disconnect exists between this willingness to learn and the practical implementation of lessons drawn from this learning. For instance, while state agencies tasked with food security showed enthusiasm for

gathering new knowledge, the data collected did not offer substantial evidence to make conclusive statements about the learning orientation of institutions such as the DSD, SETA, and local government.

The case of DRDAR offers a more detailed look into these findings. A respondent from DRDAR's Head Office acknowledged their challenge in matching the yields of their strategic partners, highlighting a potential learning deficit. This was further compounded by revelations from a scientist at DRDAR's District Office (R-9), who noted the organisation's routine practice of using fertilisers without prior soil analysis. Such practice suggests a divergence from best practices and potentially signals ignorance of contemporary scientific methods to improve agricultural yields. More worryingly, there seemed to be significant resistance within DRDAR against adopting innovative methodologies. Respondent R-10, from the District Office, highlighted the organisation's penchant for sticking to traditional methods, resisting change, and potentially stifling innovation.

These empirical findings underscore a pressing concern: organisations with a mandate to ensure food security risk becoming ineffective when they fail to engage actively in a learning and adaptive process. The evidence points towards an organisation that is open to learning in theory but struggles with the practical application of this knowledge. The implications of such a stance are significant, particularly for an entity tasked with ensuring food security.

Considering these findings, DRDAR must re-evaluate its approach urgently. Drawing from the insights of Saadat and Saadat in 2016, creating an environment that promotes active learning and ensures the tangible application of these lessons can be the linchpin for DRDAR to achieve its food security and agricultural development goals.

CONCLUSIONS

This study identifies challenges in rural South Africa's food security programmes, such as resource limitations, procurement delays, political interference, centralisation and poor coordination. As found in previous studies by Sonnino (2016) and Moragues-Faus (2020), these challenges hinder programme efficiency.

Similar to Zerbian and de Luis Romero (2023), the study revealed that organisational weaknesses contribute to the failure of food security programmes. DRDAR's organisational culture lacks emphasis on learning, involvement of lower-level employees in decision-making, and utilisation of specialist recommendations. A notable limitation of this study is its specificity to rural areas on communal land. The dynamics, challenges, and outcomes might differ for farmers on freehold land, and this distinction could influence the applicability of our findings in those contexts. Based on the results of the study, the following

recommendations are suggested to enhance the efficiency and effectiveness of food security programmes in OR Tambo District Municipality and similar rural areas:

Organisational efficiency: The supply of agricultural production inputs should be tailored to the specific environmental needs of the beneficiaries.

Accountability: The politics-administration dichotomy in food security programmes requires clear role distinctions. Stakeholders' responsibilities must be explicitly defined to eliminate ambiguity. Regular evaluations using performance metrics will keep stakeholders on track and a consequence management system is necessary for deviations or failures to meet standards.

Approach to governance: The study recommends a move towards decentralising DRDAR programmes to promote community involvement and ownership of food security initiatives. The decentralised system will have the added advantage of designing place-based strategies that respond to the unique needs of rural communities.

Coordination: Effective coordination mechanisms should be established to promote collaboration and information sharing between state agencies implementing food security programmes.

Planning and procurement: Implementing a shorter chain of command can streamline procurement processes and reduce delays. Additionally, tailoring the supply of agricultural production inputs to the specific environmental needs of the beneficiaries is crucial.

Organisational culture: State agencies should strive to create a positive work climate, foster a culture of flexibility and learning, and follow established procedures to enhance the effectiveness of food security programmes.

NOTE

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Physical Infrastructure Challenges in Rural Schools

Reflections to Promote Quality Education

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ABSTRACT

Quality education is globally acknowledged as a fundamental pillar for developmental progress in society and plays a pivotal role in shaping and empowering the future of individuals and communities. The Eastern Cape Province is characterised by vast rural areas where the rural school physical infrastructure (RSPI) is a persistent concern to quality education. The area is characterised by gross underperformance of schools, which manifests itself through consistently low Grade 12 results. The provision of suitable RSPI is the most obvious form of disparity in the Eastern Cape (EC), the policy infrastructure directive is under the spotlight for impacting service delivery in this context.

Guided by the interpretive paradigm, the research is qualitative and exploratory to obtain relevant information about the impact of infrastructure provisioning on learners' overall performance. A key question raised in the study is to determine the impact of the provision of the RSPI on the learners' rights and performance in the EC. It was found that while all learners should have equal access to quality teaching and learning, this is not the case in some rural areas, more especially in the EC which due to past imbalances, is classified as an underperforming province. Learners from rural areas are deprived of basic infrastructure such as access to internet connectivity. It was found that there is a direct negative impact concerning three aspects: infrastructure, performance and learners' rights. This phenomenon calls for an institutional assessment of, and amendment to the existing schools' infrastructure policy in the province regarding the provisioning of additional resources as a fundamental priority.

The article focused on the role of physical infrastructure in rural schools, examining the state of school buildings, classrooms, libraries, laboratories, and other infrastructural facilities to determine the challenges faced, and to advocate improvements in physical infrastructure provision to enhance educational outcomes provincially. It focused on the effect of austerity measures, gaps in policy implementation, geospatial challenges, and generally lack of maintenance planning adversely impacting public service delivery.

INTRODUCTION AND BACKGROUND

The Equal Education Law Centre (EELC) (2016:20) report, declared that the provision of RSPI is a notable source of inequality in the EC. The province's education system is characterised by persistent underperformance of schools, evident through consistently low Grade 12 results as documented in the Eastern Cape Department of Education (EC DoE) Assessment and Examinations report (EC DoE 2019:4). Observing poor academic outcomes among learners in rural schools for six years as outlined in the report, the primary objective of this study was to examine the impact of RSPI on learners' educational rights and academic performance in the EC province. Specifically, the research focused on Mangengele High School, Tsomo High School, Gobinamba High School, Middle Zolo High School, Ndyebo Ntsaluba High School, and Langalethu High School, which are situated in one of the most rural towns in the Chris Hani East Education District, Tsomo, falling within the Mthawelanga Circuit, consisting of a group of 20 to 25 schools. These schools all have inadequate basic physical infrastructure and currently are underperforming. Consequently, this study aimed to investigate whether there is a correlation between the current lack of infrastructure and learner performance, while also determining whether learners' rights are being violated as a result of the conditions under which teaching and learning takes place.

Education is a human right and a societal matter. Adequate physical infrastructure is one of the 'vehicles' necessary for the provision of education (Satapathy 2015:7). Gabel and Mapp (2018 in Lombo 2023) suggest that the protection, promotion, and fulfilment of the rights of humans require not only recognising that they have inherent rights but that humans also live under the conditions that fulfil those rights. Boser (2015:204) highlights that a school building, that lacks the most basic infrastructure, can negatively shape the quality of education. The author further concluded that structural facilities at schools profoundly influence learning and promote the wellbeing of learners and teachers. As such, the classroom environment in which children learn should reflect what society expects of them. This

in effect, means creating the infrastructure for institutions that challenges learners to be more efficient and effective (Morgan 2016:13).

Nkomo (2018:111) asserts that there are many well-documented rural school difficulties, which include the shortage of teachers, underqualified teachers and poor teacher performance. This results in poor standards of learning, underperformance and poor learner-discipline. The situation is also worsened by the shortage of resources and inappropriate physical infrastructure in rural schools. The presence of all components for good teaching and learning increases the possibility of excellent acquisition of knowledge opportunities (Coe 2017:2). Drawing from Moharashi (2016:6), infrastructure is a physical facility and also a valuable asset for human development. It needs to be seen as a system with various individual elements that are interconnected to each other. This system has a lifetime impact with other infrastructures and policies concerning management for better sustainability. Sucipto *et al.* (2017:3) attribute infrastructure to the physical systems that are responsible for the provision of transportation, drainage, buildings and irrigation together with other physical facilities that are required to meet human basic needs in the economic and the social spheres of life. The systems infrastructure is the prime supporter of the social system and economy in everyday life (Sucipto *et al.* 2017:4). The authors further define infrastructure as facilities or fundamental structures that were installed and needed for the effective functioning of the social and economic systems in society.

Figure 1 illustrates how the space for the school infrastructure includes its interactions with other infrastructures such as social infrastructure and information

Figure 1: Physical infrastructure as a system
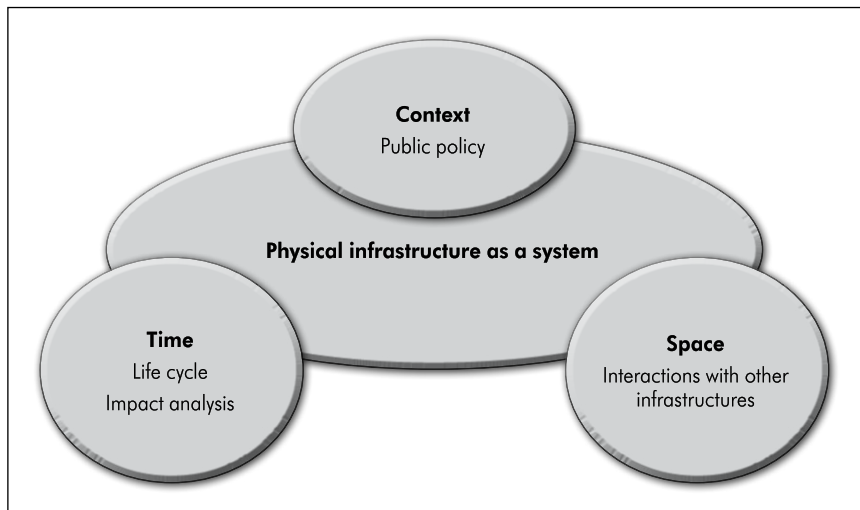
Source: (Adapted from Blokdyk 2019)

and communication technology (ICT) (Du Toit, Jooste & Conradie 2019:234). Social infrastructure gives rise to relationships between households, communities, and between materials and technologies and is shaped by the institutional and political context (Du Toit *et al.* 2019:234). The temporal aspects of school infrastructure include the whole life cycle of its construction, its possible impact on other elements and the development of the community.

The physical infrastructure as a system represents various phases of the building of infrastructure and its impact on a society's infrastructure theories report (Du Toit *et al.* 2019:236). The infrastructure system is a way of viewing infrastructure holistically. This view is generated from the fact that one whole is made up of different parts but each part must work cooperatively for effective performance by mapping spatial service values. This is a new coherent structure that acts as a reference in the change process while managing uncertainty and balancing changing needs, as well as resources. Pinto (2012:125) explained that a space should not be considered as a sum of isolated types of space but as a network of places with a shared set of properties. Some key terms are defined to place them in relevant context to the article.

A quantitative approach was used to discover aspects of the study related to the impact of RSPI provision on the learners' rights and performance in the rural schools. An interview schedule was used as a research instrument and the interviews were conducted with the rural school learners, teachers, circuit managers and parent representatives as participants who provided rich information to study. The 27 participants comprised of 12 learners, six school governing body parent representatives, six school management teams and two officials, and one circuit manager of each school. The triangulation of data collection was applied to strengthen the credibility of the data collected. Research themes were linked to the interview schedule to gauge the lived experiences of the participants.

Empirical data was collected through virtual interviews due to the Coronavirus (Covid-19) pandemic restrictions when the research was undertaken. Study participants included policymakers, teachers, parents and learners with lived experiences. Using thematic analysis, the study demonstrated that inadequate physical infrastructure has a negative impact on learners' rights and performance. Using the Theory of Change (ToC) strategies for repositioning the education sector, the study recommends the amendment of the schools' infrastructure policy for the provision of RSPI within the municipal boundaries as this would benefit the province. To achieve this, the EC provincial government must collaborate with relevant stakeholders. The study concluded that, by providing adequate physical infrastructure, the rights of learners would be fulfilled, and consequently, their performance would improve. The common trend in the selected international countries is closely related to the South African perspective regarding infrastructure deficiencies that are seriously impacting quality service delivery in rural schools.

The article is composed of an introductory section concerning physical infrastructure as a basic necessity in the context of education. It highlights the importance of infrastructure in good service delivery. Definitions of pertinent terms to contextualise the discussion are provided. The theoretical framework is presented linking infrastructure provisioning and the ToC with infrastructure development as a catalyst for change from a social and economic perspective. A discussion of international and national perspectives on infrastructure provisioning in schools follows. Empirical evidence of the South African rural scenario, findings, recommendations and concluding thoughts of areas for future research on this evolving area are provided.

DEFINITIONS OF KEY TERMS

The most pertinent terms that were used in the article are: school physical infrastructure, quintiles for learners, learners' performance, learners' rights to education, circuit and circuit management centre.

School physical infrastructure

The school physical infrastructure refers to the physical facilities of the school such as buildings, grounds, furniture and apparatus along with equipment that is vital to teaching and learning. These school building facilities should be attractive, have adequate lighting, comfortable seating, useful service facilities such as a library and laboratories, multipurpose rooms, a functional playground, classrooms, chalk and bulletin boards, sinks, work areas, filing and storage space and lockers for pupils, as declared by the Minister of Education (Motshekga 2013:13).

Quintiles for learners

Schools are categorised into five groups called quintiles based on the relative wealth of their surrounding communities. The schools in quintile 1, which are from the poorest communities are entitled to receive a minimum amount of funding per learner known as the 'no fee threshold' in the Constitution (South Africa 1996).

Learners' performance

Learners' performance is the extent to which learners attain the level of assessment as set by the Assessment Body (UMalusi in South Africa), of 30% and above that is required for the National Senior Certificate (NSC) examination. For the

school to be regarded as 'performing', the average pass rate must be 75% and above per academic year (Assessment and Examinations 2019).

Learners' rights to education

Section 7 of the Constitution (South Africa 1996) recognises that the Bill of Rights is a cornerstone of the democracy in South Africa. It enshrines the rights of everyone. According to Sooryamoorthy and Makhoba (2016:309), everyone within the territory of South Africa is a bearer of rights contained in the Bill of Rights.

THEORETICAL FRAMEWORK: THEORY OF CHANGE FOR IMPROVED SERVICE DELIVERY

The ToC is a framework which states that "improving outcomes can be achieved through the establishment of a system of change" (Serrat 2017:25). It also involves planning and implementing procedures that could help achieve specific goals and is the process of creating a framework for implementing change (Mack 2018:6). These processes include physical, digital and organisational elements that are necessary for the system to function properly. In addition, the United Nations Development Programme (UNDP) (2020) report declared that infrastructure provision that is planned, well-designed and maintained can support the achievement of an organisation's goals and objectives. Since infrastructure provision is a catalyst for development, the ToC is used to guide decision-making ensuring that it is adequately delivered to benefit learners, including those in rural areas. In this study, infrastructure provision and the ToC are intertwined, as the infrastructure provision must support the steps outlined in the ToC for the organisation to achieve its infrastructure desired outcomes. Finding out if the impact of adequate infrastructure provision would lead to improved learner performance taking cognisance of the rights of learners, the ToC was consulted.

Mack (2018:6) asserts the ToC looks at the present situation of the organisation and crafts steps to get to the desired destination. In other words, the present infrastructure position would be changed for the better. Through this theoretical perspective, Mack (2018:6) alluded that the researcher would have a clear mind map of where the rural schools' physical infrastructure provision is, where it needs to be and what actions need to be taken to get it to the desired destination. Jackson (2013) referred to the ToC as a precise type of design method for planning, participating and for evaluation that the government, private and non-profit organisations may utilise to improve the status quo. The research aimed to investigate the impact of the violation of rural schools' learners' rights and their school performance due to unfair resource allocation such as the basic infrastructure

Figure 2: Theory of Change and relationship to infrastructure provision
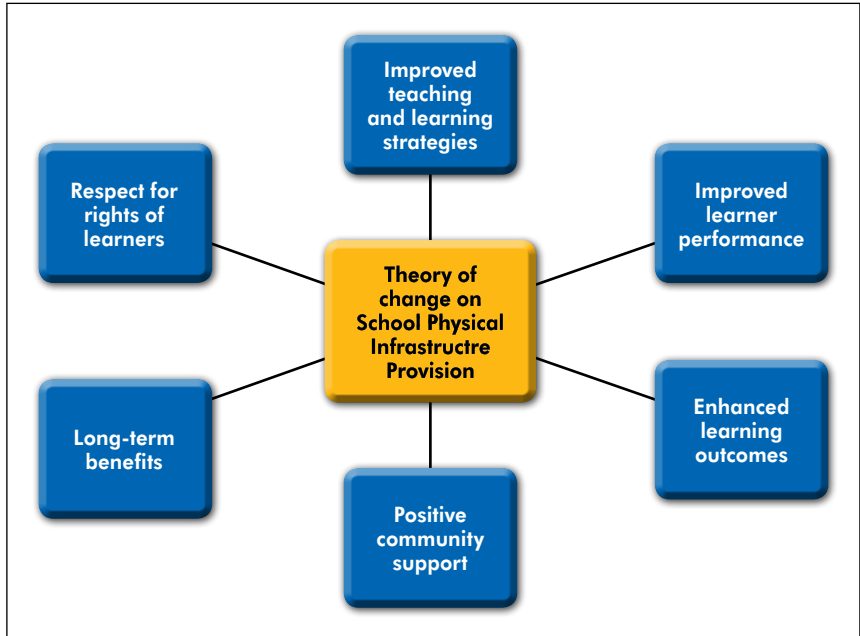
required for enhanced teaching and learning and improved service delivery. The study through this theoretical construct compared the present situation of the rural learners with the envisaged change to effect overall improvement.

The discussion concerning the physical infrastructure of schools highlighted the intricacies of the infrastructure system. If one organ or part of the system is dysfunctional, there would be a disjuncture in the end product. Inadequate physical infrastructure, which is common in the EC rural schools, may have an adverse impact on the learners' performance and their rights to quality education. The ToC framework is presented in Figure 2.

Specifically, Figure 2 demonstrates the relationship between the ToC and the provision of physical infrastructure. It highlights how physical infrastructure provision can contribute to the desired educational goals and long-term benefits drawn from the ToC in response to suggesting strategies to improve the provision of rural schools' physical infrastructure. Using the ToC perspective, may enable and prompt synergistically, the urgency of the provision of physical infrastructure in schools, leading to improved teaching and learning strategies, improved learner performance, enhanced learning outcomes, positive community support, long-term benefits and respect for the rights of learners in the educational system.

INFRASTRUCTURE DEVELOPMENT AS A CATALYST FOR CHANGE

The Development Bank of South Africa (DBSA) report (DBSA 2022:5) infers that infrastructure development is viewed as a catalyst for access to basic needs such as education, job opportunity, as well as the catalyst for the development of programmes that alleviate poverty. The discussion incorporates the school infrastructure development and importance of infrastructural development for economic growth mainly in rural areas. It also includes the technology and physical infrastructure development and the social infrastructure development. These include adequate school infrastructure so that every member of each age group could attend schools with environments that are conducive for teaching and learning (Barrett, Treves, Shmis, Ambasz, and Ustinova 2019:20). Equally, Sucipto *et al.* (2017:4) maintain that school infrastructure development can be implemented when the priorities are set according to the needs of the communities. Manggat *et al.* (2018:648) argue that the development of physical infrastructure in schools in the rural areas is seen as an all-inclusive approach where it could solve the problems of inequality and social justice for learners in rural areas in general (Barrette *et al.* 2019:27).

Figure 3 illustrates the aspirations that the community have for the development of infrastructure to promote the teaching and learning environment. This is

Figure 3: Learning environment for better educational outcomes

Accessible well-built child-centred synergetic and fully realised infrastructure

Available school spaces, safe and healthy environment and optical spaces for learning

Aspirations for schools

The practical imperative

the desired schools' physical infrastructure for the provision of quality education as a practical and fundamental imperative.

These aspirations link the salient concerns of the study:

- Availability and accessibility of schools in response to the demand of the community;
- School structure that is safe and healthy with basic amenities;
- Child-centred environment with the optimal learning spaces; and
- Teachers that need to implement pedagogy effectively to realise the learner outcomes.

Looking at the learning environment in Figure 3, there are three dimensions for the school infrastructure component namely: accessible for the available school places, well-built safe and healthy schools, as well as child-centred optimal spaces for learning (Barrett *et al.* 2019:20).

The description of an acceptable learning environment must incorporate the following:

- Good natural conditions such as lighting, air quality, temperature control, acoustics, and links to nature;
- Age-appropriate learning spaces that offer flexible learning opportunities that pupils can adapt and personalise;
- Connections between learning spaces that are easy to navigate and that may provide additional learning opportunities;
- A level of ambient stimulation using colour and visual complexity;
- Schools that are designed from the inside out (classroom to school) so that each space meets the needs of its inhabitants; and
- Designs that consider local climatic and cultural conditions.

By investing in school buildings, Mukuni (2019:60) alludes to the three benefits that can be realised namely: skilled jobs in local communities, healthy and safe quality of life with educationally sound buildings for both learners and teachers, as well as the gains from quality education for future generations. In rural communities, schools such as Tsomo, Mangelengele, Langalethu and Gobinamba have physical infrastructures which are the most visible with prominent public structures, and they are utilised as the centre for many rural activities such as weddings, social functions and sports events (Mukuni 2019:61). Again, school buildings are the major capital assets in the rural villages (Buffington 2019:15). He further infers that physical infrastructure for rural schools "serves a central role for the community and provide great opportunities to build deeper connections with rural educators, community leaders, students and community members" (Buffington 2019:16).

Infrastructural development: Economic and social growth

Stiftung (2018:81) asserts that infrastructure development plays a key role to ensure rapid economic growth and poverty alleviation. However, the most to benefit are urban rather than rural areas where there is limited access to services such as piped water, connecting roads, power and telecommunication, as outlined by the DBSA (DBSA 2020). Since expenditure on education and the improvement of lifestyle contributes to raising the quality of the population, the economic infrastructure is crucial economic development. Mehta (2019:953) asserts that economic infrastructure is the fundamental facilities and services that enable various economic activities which promote economic development in the country, such as education, transport and communication, health, irrigation and electricity as some few examples. Graham and Hennell (2014:2) described the social infrastructure as a "long-term physical asset" that allows for goods and services provision, and it operates in economic markets that promote barriers to entry.

Infrastructural development needs and benefits in rural areas

Generally, physical amenities are needed by the community which include industries, buildings, roads, bridges, health services, governance, and many others (Manggat, Zain and Jamaluddin 2018:652). Chakamera (2020) views infrastructure development as the foundation of a sustainable economy and as a means to achieving broader rural education needs. This includes providing basic services which are critical to security, governance, economic development, and social well-being in rural areas.

According to Manggat *et al.* (2018:649), infrastructure development is a major barometer to measure the performance of a country. The provision in the rural areas requires integration, collaboration and consultation between the role-players to implement the programme for community development. Chakamera (2020) pointed out that infrastructure development is none other than an instrument that increases the quality of living in a society thus promoting the quality of life of citizens. Poor infrastructure is a major obstacle in the development of rural communities and in economic progress as it drastically changes the lives of communities and contributes to poor education delivery (DBSA 2022:8).

As a crucial part of a supportive environment for investment and livelihood, adequate infrastructure promotes economic growth, reduces poverty, and improves delivery of health and other services (Mullah, Samson, Wambua and Balanga 2016:1). Specifically, in rural areas, infrastructure is a bedrock for development services such as education (Mullah *et al.* 2016:1). Likewise, infrastructure development might be understood as a system of an object that creates the grounds on which other objects operate (Barua 2021:2) and is formed only through relations

that generate acceptable environments of everyday life. Nyumba, Sang, Olago and Waruingi (2021:14) perceived it as a parameter and index that measures the extent to which each country can compete globally.

Manggat (2018:650) claims that the advancement of fundamental infrastructure for the economy in the rural areas is viewed as an accelerator for economic growth which manifests as good quality of life that benefits the rural community. The transport service is considered as one of the social structure components with systems that are disadvantageous to the community, and which erode the standard of living. It also creates difficulties for goods and services to be delivered, and the means to gain access to school and social services (DBSA report South Africa 2020).

INTERNATIONAL AND NATIONAL PERSPECTIVES CONCERNING PHYSICAL INFRASTRUCURE PROVISION IN SCHOOLS

Globally, school infrastructure is one of the critical dimensions that contributes to quality education (UNICEF 2012:1). The other four dimensions include learners' health, a healthy environment, quality teacher input and knowledge, as reported by the United Nations Children Education Fund (UNICEF) (UNICEF 2014:16). The commitment to investing in the excluded and disadvantaged children by providing them with opportunities to grow up healthy, educated and protected is significantly accentuated in the UNICEF report (UNICEF 2017:1). It is further reported that rural households do not have access to adequate school physical infrastructures including safe drinking water, electricity, reliable transportation or modern communication services. Boser (2015:205) emphasises that structural facilities at schools profoundly influence learning and promote the wellness of learners and teachers. The author supports the view that the classroom environment in which children learn should reflect what society expects of them. It is further concluded that 'buildings and other structural facilities profoundly influence learning,' and ultimately contribute to enhanced public service delivery. Adequate infrastructure is also a prospect for the dignity of learners (Barnes 2023:2).

The Tsegay (2012:6) report indicated that the inadequate services of infrastructure are common in many communities that are rural in Africa. The countries where the hearings were conducted include the Republic of South Africa, Kenya, Liberia, Senegal and Mozambique. The lack of rural infrastructure was identified as the stumbling block to socio-economic development. The report noted that "rural households do not have access to safe drinking water, electricity, reliable transportation or modern communication services and of course, adequate school physical infrastructure" (Tsegay 2012:7). The physical infrastructure in

rural schools of selected other parts of the world are discussed to give further context to the issues raised in this article.

Physical infrastructure of rural schools in China

Raiser (2020:4) reported that one of the poorest rural provinces in China is Henan with 51% of the population living in rural areas, which makes it the largest rural population in that country. It also has the highest household population. Henan is one of the less-developed provinces in China and 68% of the province does not have access to piped water and sanitation services (Keyes 2021:2). There are similar educational issues to the EC province such as overcrowded classes with an average of 113 learners housed in one classroom (Yiwen 2020:4). Naiga and Penker (2014:695) assert that the Chinese government leads the world in infra-structure investment and that it is their top priority. Figure 4 graphically represents substantial increase in education infrastructure investment from 1990 to 2019 by the Chinese government.

Many Chinese rural schools have poor school physical infrastructure including leaking roofs, crumbling foundations, broken windows, and deteriorating walls. This negative assessment of Chinese schools forced the government to allocate the largest percentage of the education budget towards infrastructure (Yu, Zhu and Balezentis 2017:10). The largest share of those funds was channelled to the construction of new schools. McKinsey (2018:20) also asserts that the Chinese government decided to transform children's future in remote areas with compre-hensive and innovative schools' infrastructure programmes to promote progres-sive life-long learning and a safe environment.

Figure 4: China's Investment in Educational Infrastructure: 1990–2019
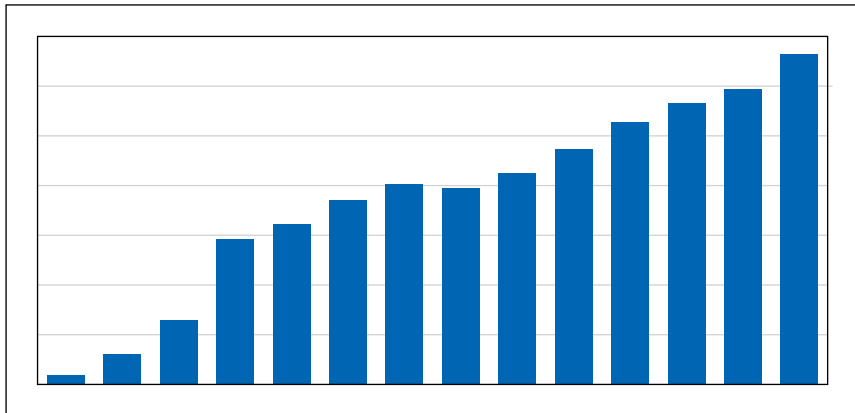
Source: (Statista.com 2020)

Physical infrastructure of rural schools in India

In India, Bhattacharyya (2018:19) reports that there are schools without adequate physical infrastructure and human resources. There are also imbalances in its provision between rural and urban schools, which is more biased towards the city schools (Bhattacharyya 2018:19). There are areas like Jharkhand in the northeast part of India that has a lot of similarities to the EC in South Africa. Jharkhand has higher rates of concentration of the poorer states in India (Lombo 2023).

Stone (2016:4) stressed that in India, 12% of schools have no classrooms and 4% have no buildings at all. The author maintains that with teachers in rural areas where there are bad infrastructural conditions, they are mostly absent from schools because of health problems caused by the adverse building conditions. Azoulay (2019 in Lombo 2023) confirms that inadequate infrastructure results in a high rate of teacher or learner absenteeism. It was established that the importance of a quality teaching environment impacts positively on achievement, earnings, productivity, and economic growth.

Equally, Yiwen (2020:1) asserts that in India, the quality of the schools' infrastructure and quality teachers have a major impact on learner performance and this leads to learner-retention in schools. Their mandate from the 'Right to Free and Compulsory Education 2009' policy to date, made adequate infrastructural arrangements obligatory in schools (Yiwen 2020:4).

Physical infrastructure of rural schools in Malaysia

The Malaysian government has committed itself to develop rural areas by creating several appropriate ministries which include the Department of Public Works as well as the Rural, Regional Development Department and the Infrastructure Facilities Ministry. It has realised the importance of the rural school society and is willing to enhance their well-being (Manggat 2018:651).

Rasak (2017:2) claims that Malaysia is a rapidly developing country with the exclusion and isolation which still exists among the communities resulting from the geographical locality that involves the inequality of infrastructure development in urban and rural areas. In some rural areas in Malaysia, infrastructure is not as well developed as compared to the urban or outskirts areas. This has affected the quality of life of the community that lives in the rural areas in the country.

As a result, in urban areas, Malaysians do not consider infrastructure as a factor or as a trend when they decide on the choice of schools for their first-grade learners (Mohamed 2014:175). Instead, they look at curriculum delivery, the language of instruction, and quality of teachers. This is mainly because Malaysians have invested a lot of money in education (Mohamed 2014:176), more especially in urban schools.

Physical infrastructure of rural schools in Zimbabwe

In Zimbabwe, the Human Rights (2018:8) report established that primary education is not compulsory, free, or universal. However, the Zimbabwean Constitution declares that "every citizen and permanent resident of the country has a right to basic state-funded education". Mukeredzi (2016:41) argues that the rural nature is not adequately analysed and is interpreted to be the physical space, which is associated with numerous forms of segregation, shortage, and needs. In addition, the schools in rural areas are seen as secluded centres of learning that are established for rural communities. Shadreck (2012:769) juxtaposed the rural school physical infrastructure provision in Zimbabwe with the exodus of teachers into urban areas, poor socio-economic background, the challenge of attracting and retaining adequately qualified teachers, lack of funding and shortages of resources. Yabiku and Agadjanian (2017:13) explained that the 'push' and 'pull' factors causes poor learner performance in rural schools. For example, the 'push' factors are the dilapidated school infrastructure and lack of connectivity while 'pull' factors would include better working environments, connectivity, and exposure to various institutions of learning.

Nyoni (2015:77) affirms that certain rural primary schools in Zimbabwe fit the description of a homestead which is depicted by four grass huts. The author further expounded that several schools lack amenities including adequate infrastructure thus many qualified teachers do not want to work in these remote rural schools. In this regard, Shadreck (2012:770) recommends that the Zimbabwean government should be responsible for adequate physical infrastructure in rural schools, as well as bursaries for teachers seeking to further their education.

Another possibility as observed by Barrett, Treves, Shmis, Ambas and Ustinova (2019:1) is that to improve learner performance, particularly the aspiration for accessible, well-built, learner-centred, synergetic and fully realised learning environments is vital. Likewise, Garira, Howie and Plomp (2019) held the view that the school infrastructure, although it cannot educate learners on its own, is essential in influencing the quality of the learners' performance.

Nevertheless, despite the inadequate infrastructure, Zimbabwe's education has retained its ranking among the best in Africa regarding learner performance (Jansen 2018 in Lombo 2023).

Physical infrastructure of rural schools in Uganda

In Uganda people living in rural areas were reported to be 83.9% of the total population (Trading Economics 2016:1). Ngaka (2016:89) asserts that the rural school physical infrastructure remains a huge challenge. Nonetheless, rural school children are expected to compete with learners in urban and semi-urban areas

who have adequate to very good infrastructure. These unbecoming environments lead to dismal rural schools' learner performance in Uganda (Ngaka 2016:100). The Media Group report (Uganda 2016 in Lombo 2023) suggested that rural development should facilitate the growth of rural businesses by complementing infrastructures as well as services such as roads, water supply, schools, and health services. Maractho (2017:18) emphasises that the government and other players responsible for infrastructure must adopt innovative approaches to finance and implement rural development programmes.

Byaruhanga and Basheka (2017) reported that the Ugandan government identified the road infrastructure as a key driver of economic growth and most funds in the national budget have been directed towards this priority. Kasaija (2015:4) suggests that more focus must be on the road infrastructure to improve economic growth excluding the importance of developing adequate school infrastructure to improve education standards in Uganda. This priority must be coupled with the improvement of the rural school physical infrastructure to benefit the 83.9% of the Ugandan population which use rural schools.

Buwembo (2016:13) views the situation in Uganda differently and contends that most schools that post poor results are public schools. The unpalatable rural situation in Uganda should force the government to reflect on the situation and plan better for rural schools into the future (Nassaka 2017:25).

The government in Uganda declared education as a basic human right and contributing to education is regarded as part of the solution to poverty reduction (Lombo 2023). Consequently, the Ugandan government is committed to providing rightful access to education that is affordable to all (Uganda 2018 in Lombo 2023). The Ugandan Education Act 13, 2008 provides a platform to increase and improve equitable access to education for all learners (UNICEF 2018).

Physical infrastructure of rural schools in Ghana

In Ghana, the inadequate educational infrastructure and poverty were believed to be some of the contextual factors that cause a low level of education (Nassaka 2017:4). However, Mahomed, Bin and Rafee (2015:599) assert that the main issue in Ghana is the urban-rural migration, which grew from 23% of the total population in 1960 to 54% in 2015. Rolleston (2017:135) emphasises that low levels of education are closely linked to the low level of economic development, quality teacher inputs and educational infrastructure. Kabiru and Arsha (2016:132) added that an educational physical infrastructural facility is the pillar of any educational system for both primary and secondary levels. They concluded that for meaningful educational development to be achieved, adequate provision of education infrastructure is paramount.

Basic schools in Ghana have been disadvantaged with challenges caused by inadequate infrastructure, insufficient teaching staff and lack of ICT, laboratories,

as well as libraries (Buwembo 2016:7). Mahomed (2018:2) affirms that the development of school infrastructure and facilities helps to increase school attendance, motivation and academic performance of learners, as well as the well-being and attitude of teachers. As for the learners' rights, Wang, Lui, Li and Li (2016) observed that the government of Ghana has a generally good policy framework regarding the right to education. It has ratified most major international rights treaties, as well as the right to free and compulsory education from elementary stage right up to high school, supported by policies, as enshrined in its Constitution, Human Rights report (2018:3). As a result, in 2017, significant progress was made in the implementation of the child and family welfare as well as justice for children's policies, according to the UNICEF report (UNICEF 2017:18).

Rwanda's rural school physical infrastructure

The genocide in Rwanda which led to the killing of a quarter of its population in 1994 resulted in the loss of some of the most educated human capacity and infrastructure in the country (Hirano 2011:301). The Rwandans had to develop and formulate new policies and new legislation which includes: The National Building Code, Child-Friendly Schools Infrastructure Standards and Guidelines, Special Needs Education and Girls' Education (Rwanda 2020 in Lombo 2023). Nkusi (2019:4) reveals that adequate school infrastructure is a key element that can contribute towards achieving a better quality of education for all. The author further posits that while the country is aiming for improvements in quality and learning, shortages in learning facilities such as physical infrastructure must be prioritised.

The clearly defined Rwandan 'Child-Friendly Schools Infrastructure Standards and Guidelines' were presented in 2008 from the premise that: "Education is a fundamental human right and it is essential to ensure that all learners can realise their potential. A key aim of education is to give all citizens the necessary skills and values to improve their quality of life. A school must have a child-friendly, barrier-free environment which promotes inclusive access and equal rights of every child. Physical infrastructure requirements of a child-friendly approach must suit the identity, ethos, and culture of the school's overall vision" (Wang *et al.* 2016).

The Rwandan national standards for infrastructure provision are prescribed to complement a simple understanding of the core issues involved in school infrastructure across all those involved in the renewal process (Wang *et al.* 2016). Nkusi (2019:30) affirmed that the need for modern education sector infrastructure development is vital in Rwanda.

Physical infrastructure of rural schools in Mozambique

The last Southern African Development Community (SADC) country identified for discussion in this article is Mozambique with 64% of its population living in rural areas as indicated in the World Bank report (World Bank 2019). Smith (2018:1) posits that the level of education is very low and there is a very high dropout rate with only 40% of learners completing primary education. The population of Mozambique is nearly 29 million people with a growth rate of 3% per annum in the past 30 years (Porter, Bohl, Kwasi, Donnenfeld, Cilliers 2017:42).

The cities in Mozambique run 'Triple Shift Teaching'. This is a system where early grades start classes in the morning and finish at noon. Thereafter, the middle grades start classes at noon and go up to late afternoon. Last, secondary school learners start school in the evening and finish late at night (Nerenhausen 2014:7), which leads to the reduced hours of teacher-learners contact time. The 'Triple Shift Teaching' is directly linked to the high pupil/teacher quality inputs ratio, overburdened infrastructures and overburdened teachers. There is also a challenge in management control by the school's management team in relation to the running of the school and the regular teacher and learner presence (Yabiku & Agadjanian 2017:10). The low learner performance is exacerbated by the high teacher-learner ratio, which is even higher in the evening shifts.

Physical infrastructure of rural schools in South Africa

In the post-1994 period, the Minister of Education in South Africa, declared that public schools are categorised into five groups called quintiles. This gives guidelines to the allocation of resources mainly financially. Quintile 1 is the poorest quintile and quintile 5 is for the least poor to rich communities. These poverty rankings are nationally determined according to the level of poverty in the community within the school environment as well as the factors of the physical infrastructures as presented in Table 1. Schools that are in quintile 1, 2 and 3 (the poorest quintiles) have been given a 'no-fee schools status'; that is, learners do not pay school fees, while schools in quintiles 4 and 5 are fee-paying schools. The allocation of resources is guided by these poverty levels.

Osman (2018:26) asserts that education is a human rights issue and a school is the platform for which this right is enriched. It is a right that can be facilitated in a school when adequate infrastructure, among other resources, is available. This means the availability of classrooms, laboratories, libraries, school furniture and teaching and learning material. Gabel and Mapp (2018 in Lombo 2023) assert that the disparities in infrastructure provision violates learners' rights to education.

This point is in line with the provision of learner needs such as physical infrastructure to deserving rural schools, as part of one of the national imperatives in

the country for basic education. The Bill of Rights from the country's Constitution which forms the foundation of democracy in South Africa, affirms that all South Africans have the right to education (South Africa Constitution 1996). The condition of the learning environment for learners is a critical education factor because it adds value to their educational achievement, as well as to their well-being (Mosala, Venter and Bain 2017:238). Therefore, the learning environment must be safe, healthy and educationally fitting.

Several scholars hold the view that sufficient physical infrastructure in schools encompasses expansive and well-ventilated classrooms, libraries, playgrounds, well-equipped laboratories, amenities like furniture, and essential utilities such as water and electricity, as well as a study hall, games equipment, and an assembly area (Metia 2019:39; Mukuni 2019:60; Kariuki & Ndani 2019:133; and Jimenez 2019 in Lombo 2023). Notably, the objectives and benchmarks outlined in the major national strategic goals in the basic education sector in South Africa focus on the proportion of schools that possess adequate physical infrastructure, given that substandard facilities can impede the provision of quality education, Goal 24, of the Action Plan 2019 for 2030 adopted by the Department of Basic Education (DBE) states that the physical infrastructure and environment of each school should inspire learners to attend and learn, and teachers to teach (South Africa 2019:50).

Post-1994, the South African government made serious commitments to protecting the rights of children, such as a right "to be educated and be developed mentally and physically; to be treated equally, with dignity as a human being, as well as the right to a safe environment that is conducive to learning" (Sooryamoorthy & Makhoba 2016:320). Similarly, and related to this article, the South African Human Rights Commission (SAHRC) report (2017:29) accentuates that the learners' rights should be protected in sufficient, safe and functional educational institutions. In this context, the right to education has become indispensable and invaluable in a bid to substantially reduce poverty and to tackle socio-economic challenges (SAHRC 2017:35).

Learners need to attain fundamental knowledge, attitudes and skills through learning, and this must be measured periodically (Dillman 2021:1). The measurement of achievement from a subject or various subjects is underscored by the learners' performance. Internationally, teachers and officials from education departments measure learner achievement using learners' performance and results from standardised tests and graduation rates (Li, Kwok and Zhou 2016:4). In South Africa, the grading of learner assessment is measured in levels of achievements with level 1 being the lowest achievement and level 7 the highest. Assessment is the process of recording, interpreting, and gathering, including using reported data about a learner's progress and achievement in developing knowledge, skills and attitudes (South Africa Annual Report DoE 2020).

In South Africa, the plight of the RSPI was declared by the Minister of Basic Education (Motshekga 2018) at the Matric Class of 2017 NSC examinations results release. The Minister admitted to the failure of the government to address the issue of equity including equitable RSPI provision. The same rural school learners with inadequate infrastructure are expected to compete with learners from schools with the best infrastructures in urban areas. For example, in Table 1, of the 60 344 Grade 12 learners from the EC who sat for NSC examinations, 52 379 learners were drawn from quintile 1 to 3 (poorest communities). This represents 80% of the EC Grade 12 learners, class of 2019 in the EC DoE EMIS report (2019:50). For the sake of comparing annual performance of learners from the most advantaged to the most disadvantaged areas, the provincial results are analysed per quintile. Quintile 1 represents the poorest learner community while quintile 5 is for learners from the economically better communities (Department of Basic Education 2019). It indicates the performance of learners from 2014 to 2019 in the NSC examinations per quintile, with learner performance in these rural schools as very low, illustrated in Table 1.

Table 1: NSC results by quintile

Quintile	2014		2015		2016		2017		2018		2019	
	#Wrote	% Passed	#Wrote	% Passed	#Wrote	% Passed	#Wrote	% Passed	#Wrote	% Passed	#Wrote	% Passed
1	14174	58.7%	21965	48.5%	22694	48.8%	17267	58.6%	16362	68.9%	16378	74.7%
2	12177	60.1%	17000	50.1%	15837	55.9%	12612	61.5%	12459	67.5%	11669	75.1%
3	26950	62.6%	34564	54.4%	32410	57.9%	26451	61.8%	25255	65.9%	24332	73.6%
4	2971	85.5%	3882	82.5%	3594	83.9%	3141	81.3%	3311	83.8%	2702	85.6%
5	5865	95.0%	6337	94.5%	5407	95.9%	5480	95.0%	5471	93.9%	5263	93.6%
Grand Total	62137	65.4%	83748	56.3%	79942	58.7%	64951	64.6%	62858	70.4%	60344	76.5%

Source: (Provincial Examination Report 2019)

The Minister of Education, Angie Motshekga (2013:13–18), declared the norms and standards for school physical infrastructure provision. These norms and standards published in 2013, as presented in Table 1 also set deadlines for when the required infrastructure must be provided to schools. For example, it was anticipated that the upgrading of inappropriate school structures would be completed before the end of 2016. This did not materialise as envisaged and the EELC (2016:85) report on schools with inappropriate physical infrastructure revealed that 2 411 schools were still without appropriate infrastructure.

The provision of educational opportunities is a principle enshrined in the *Constitution of the Republic of South Africa* (South Africa 1996). The DBE

described this principle as necessitating fairness of both education resource inputs and thus education outcomes (South Africa 2015). This interpretation presents procedures relating to preparation for public school infrastructure. The Constitution (South Africa 1996) denotes the right to education and to ensure the effectiveness of this right the state must maintain the standards that are not inferior in comparison to other public educational institutions. One of the most visible forms of disparity in the provision of resource inputs has been the physical teaching and learning environment; including infrastructure, equipment, basic services, school furniture, as well as ICT (South Africa 2012).

Drawing from the South African Constitution of 1996, the objectives of the Constitutional provisions are as follows:

- "Provide minimum uniform norms and standards for public schools' infrastructure;
- Ensure that there is compliance with the minimum uniform norms and standards in the design and construction of new schools and additions; alterations and improvements to schools which exist when these regulations are published; and
- Provide timeframes within which school infrastructure backlogs must be eradicated" (South Africa 1996).

The Education Act 84 of 1996 also emphasises the provision of a uniform system for governance and the funding of the schools. In addition, the Infrastructure Development Act 23 of 2014 focuses on the importance of enabling and co-ordinating public infrastructure development. It is of vital economic and social importance to South Africa to ensure that infrastructure development is prioritised in planning, for the following reasons.

- To approve the implementation of the infrastructure related programmes.
- To uphold the government's sustainable goals through the provision of infrastructure
- To improve, monitor and evaluate the provided infrastructure.

The purpose of the Infrastructure Development Act of 2014 is also to:

- Ensure that infrastructure development in the Republic is given priority in planning, approval, and implementation;
- Ensure that the development goals of the state are promoted through infrastructure development;
- Improve the management of such infrastructure during all life-cycle phases, including planning, approval, implementation, and operations; and
- Provide for matters incidental thereto (South Africa 2014).

The National Development Plan (NDP), 2030 was released by the President of South Africa in 2012 as a landmark document that gives guidance to the nation

towards achieving a "better life for all". It defines a desired destination and identifies the role different sectors of society need to play in reaching that goal (NDP 2012). The NDP aims to eliminate poverty and to reduce inequality by 2030. Manual (2013:3) argues that "according to the plan, South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society".

The Action Plans for all the departments must be linked to the NDP 2030 as outlined by the Minister of Education in Action Plan 2024. Action Plan 2024 is closely aligned to the government's NDP and reflects the country's commitment to the Sustainable Development Goals (SDGs) of the United Nations (UN), and the Continental Education Strategy for Africa (CESA) of the African Union (Motshekga 2020:2). Additionally, the government must give a strategic direction in response to the unprecedented Coronavirus pandemic context. Action Plan 2024 also gives clear linkages between basic education and other sectors on how South Africa compares internationally. The content is based on a lot of research as well as private and public consultation. The part of the sections in the plan that deals with education also drew to a large extent, on early versions of Action Plans namely: Action Plan 2011, Action Plan 2014 and Action Plan 2019. It is also closely aligned to the NDP 2030. It bears the overall goal of the various actors in the basic education sector which remain to be the improvement of the quality of learning outcomes, and to reduce educational inequalities.

This plan represents another milestone in the journey towards quality schooling for all South Africans. The plan has 27 goals where Goals 1 to 13 deal with outputs the country wants to achieve concerning learning and enrolments, while Goals 14 to 27 deal with how the outputs are to be achieved. This plan also reflects on major developments in the basic education sector since the release of the last sector plan in 2011 namely: Action Plan to 2014: Towards the Realisation of Schooling 2025. It also restates many of the priorities outlined in the earlier plan, as to a large extent, priorities have remained the same in recent years. However, there are also shifts of the emphasis in tackling lessons learnt and, most importantly, priorities put forward by the NDP (South Africa NDP 2012) focusing on the planning horizon in the current plan for 2030. The medium-term horizon was set at 2019, which was the end of the 2014 to 2019 electoral cycle.

The DBE had also brought into line its Action Plan to take into consideration the 2030 timelines prescribed in the NDP: Vision 2030. "The Action Plan to 2019: Towards the Realisation of Schooling 2030" guides the operations of the basic education sector. Among the medium-term deliverables of the DBE is the improvement of school infrastructure. In its 'Safety in School' programmes, the DBE also focuses on the improvement of physical infrastructure in all schools including the rural schools (South Africa Action Plan 2019).

FINDINGS AND RESULTS

The themes and objectives of this study guided the nature of the research that was undertaken. These objectives have been met and through the empirical evidence and findings of the study, the research prompts the EC DoE to revisit its strategy on the provisioning of physical infrastructure in the rural schools. Theoretically, the ToC is necessary for the implementation of this change. Empirically, the rural school communities believe that if adequate physical infrastructure was provided in all schools as outlined in the infrastructure norms and standards, the rights of the learners were going to be fulfilled, and the level of performance was going to tremendously improve. The themes that are addressed are as follows:

Conformity to quality standards of physical infrastructure provisioning in rural schools

Based on the infrastructure policy imperative, the government has failed to play the key role of ensuring adherence to the norms and standards for physical infrastructure provision in rural schools. The rural community had high expectations from the democratic government to deliver well-deserved resources to schools. Instead, they cited the dilapidated school buildings, shortages of classrooms, unavailability of sanitation spaces and unavailability of media and ICT centres. As Hirsch (2017:39) argued, the classroom physical environment is one of the most important factors that affects the morale and learning of the learners. By creating a conducive enabling environment, learners have a sense of belonging and safety. The current status of the classrooms' situation in the EC in terms of conditions and overcrowding, negatively affects the morale and eventually, the performance of learners. Though RSPI remains a major challenge in the EC, the views seemingly depict that the adverse conditions of the rural schools are not a priority for the EC provincial government.

Effects of physical infrastructure provisioning on learners' rights

The rural school learners in the EC are deprived of the right to learn because adequate space is not provided for them. There are activities that cannot be carried out due to the unavailability of the necessary resources. The evidence in this study shows that the rights of rural school learners are severely compromised when it comes to the provision of the physical infrastructure. Regarding the availability of information necessary for learners to carry out their studies, 90% of the schools in the study have neither a library nor a computer laboratory. Further to that, most rural schools are far from town, therefore, learners depend only on the prescribed textbooks and the teachers' knowledge at their disposal.

About equity and fairness, participants felt that they do not receive equal access to the opportunities that allow the learners to pursue a life of their own choice. They claim that they are entitled to these opportunities by virtue of being learners in this country. The promised 'better education for all' will remain a dream in the rural communities for as long as there is no provision of the necessary resources which among others, involves adequate physical infrastructure. The quality of teaching and learning is compromised by the poor infrastructure which leads to affecting the rights of learners negatively, including the right to be treated equally like learners in well-resourced schools. This resulted in at least 2 411 rural schools that still lack adequate infrastructure as indicated by the EELC (Equal Education Law Centre 2016:85).

Impact of physical infrastructure provision on learners' performance in rural schools

The provision of the infrastructure is to enable teaching and learning to take place effectively so that the learners, community, and teachers can benefit. Lack of classrooms, library and computers are viewed as the reason for rural school children underperforming or failing. Based on the analysed data, the EC government is still lagging behind in the provision of adequate physical infrastructure in rural schools. Improving school infrastructure remains a fundamental requirement for creating a conducive learning environment and is deemed a defined gap through this research study. The communities are not consulted on the decisions regarding the kind of infrastructure needed by the school. The physical infrastructure is viewed as the key necessity for the improvement of performance of learners. It is also the right of every learner to be in an environment with adequate physical infrastructure.

Strategies to improve the provision of physical infrastructure in rural schools

From the study findings, there was a strong view that the government needs to acquire the audited data of all the schools that have infrastructure challenges. More importantly, increased and prioritised attention must be given to the rural schools. The challenge is that there are a large number of rural schools that are not in the renovation or building plans due to inaccurate data collected by the government (Mthethwa 2020:4). This would result in those schools remaining in crisis conditions.

In an endeavour to improve learners' outcomes and their issues of rights, the EC DoE has moved learners from small schools to those that are better equipped to provide quality education. A member of the Executive Committee in the DoE, Gade (2020:20) reported, however, that this is a temporary measure, whereas the data shows that there is a need for a permanent well-resourced Mega School which could combine all these small schools that are in nearby villages.

The government aims to develop appropriate skills and capabilities as it embarks on interventions to improve the quality of education outcomes in South Africa but the rural school community feels left out of the loop. They see a dire need for the government to invest in their schools. There are no clear guidelines for the prevention and management of corrupt practices. Other participants perceived resource monitoring as a way of curbing corruption practices because they believe that corruption affects resource provisioning to learners. The absence of these resources causes learners to underperform.

The empirical evidence points to the fact that there was less consultation with all the stakeholders. The school principal was often unaware of the activities that took place in the school. There is a need for access roads to most of these schools, and it is claimed that the municipality is responsible for providing this resource to the rural schools as a priority.

The South African Schools Act 84 of 1996 prescribes the minimum infrastructure to be provided in every school including the following: (i) classrooms; (ii) electricity; (iii) water; (iv) sanitation; (v) a library; (vi) laboratories for science, technology, mathematics and life sciences; (vii) sport and recreational facilities; (viii) electronic connectivity at a school; and (ix) perimeter security. However, this study reveals that there is a huge challenge of the RSPI being fulfilled in these communities.

It is evident that the EC DoE has not adhered to the norms and standards for infrastructure as prescribed in the guidelines. All the evidence points to this fact, such as the over-crowded classrooms, dilapidated buildings, bad condition of the access roads, unavailability of media resources and ICT, as well as science laboratories. There is a general dissatisfaction with the provision of the RSPI and this has resulted in the violation of the rights of the rural schools' learners, as well as negatively impacting their academic performance. Contrary to the norms and standards for the school infrastructure, the government does not commit to investing in rural schools as a move towards a better RSPI.

RECOMMENDATIONS

The following recommendations are made:

Implement quality standards in terms of the Norms and Standards for Infrastructure Policy

The EC DoE has traditionally used the sectoral approach in providing physical infrastructure in the schools because it is organised along sectoral lines such as provincial office, districts circuits and schools. This means that various institutions are

responsible for different entities. However, rural areas by nature fall into a more spatial concept that crosses sectoral boundaries. Providing the infrastructure spatially would benefit the specific space of the province. The use of municipal boundaries may be plausible as a strategy to provide physical infrastructure in rural schools.

This is more possible now that the education districts are aligned to the district municipalities. Funds for the Department of Sport in one municipality together with DoE funds could be collectively utilised to benefit the schools and their immediate community. Section 195 of the *Constitution of South Africa* (1996) emphasises that efficient, effective and economic use of resources must be promoted. Each government entity in that space could utilise its budget to benefit the community and concentrate on among other things, the priorities focused on schools. This could scale up efforts on the application of the Norms and Standards for Infrastructure policy to move *from* theory *to* practice in a more effective and pragmatic manner.

Ensure protection of rights for rural school learners

Education is a fundamental human right and it is essential to ensure that all learners can realise their potential (Nkusi 2019:4). The fundamental aim of education is to give all citizens the necessary skills and values to improve their quality of life (UNSDG 4 2015). A school must have a child-friendly, barrier-free environment that promotes inclusive access and equal rights for every child. Physical infrastructure requirements of a child-friendly approach must suit the identity, ethos and culture of the school's overall vision (Wang *et al.* 2016).

Since all the participants confirmed that the government has disrupted the rights of learners with the inadequate infrastructure provision in rural schools, it becomes imperative for the EC government to recognise and respect the voices and rights of disadvantaged and poor communities by providing quality physical infrastructure.

Improve rural school learner performance

The empirical evidence has shown that the lack of adequate physical infrastructure contributes to the underperformance of rural school learners since infrastructure is one of the key factors necessary to promote effective teaching and learning. The teaching and learning environment must be created in such a way that learners should be intrinsically motivated to learn (Wagener 2016:6). The government in collaboration with the school communities, stakeholders and private partners should ensure that rural schools receive equal facilities, resources and support to promote fair competition throughout the country. This action would be a meaningful step towards realising the UNSDG Goal 4 and the NDP

Vision 2030 which aims to provide all South Africans with quality education and to reduce inequalities.

Implement strategies to improve provision of rural schools' physical infrastructure in the Eastern Cape

Learner outcomes are affected by the lack of adequate school physical facilities and resources (Tajik, Shamatov and Fillipova 2022:199). Stone (2016:4) emphasises that the ToC could be used to develop a strategy or reposition the sector or the organisation through assessing the present situation and by crafting steps to get to the desired organisational outcomes. Policymakers can use the ToC strategy as a theoretical lens for the provision of adequate infrastructure and take the community and other stakeholders on board. This could result in an in-depth understanding of the programme by all relevant stakeholders and bring about the desired change. In this study, the desired change is adherence to the implementation of the Norms and Standards for Infrastructure policy which can be maintained by continuous monitoring and evaluation.

Rural school physical infrastructure monitoring and evaluation

Effective governance also focuses on effective monitoring and investment promotion in infrastructure (Sahoo & Bishnoi 2016:51). The data shows that there is lack of monitoring of resources from the provincial government to the schools. This lack of effective monitoring is a significant gap identified in the research undertaken. It is hoped that these recommendations could contribute to the formulation of policies that prioritise the rural school physical infrastructure provision in addressing the current deficiencies prevalent in the schools that is seriously impacting good public administration practices and enhanced service delivery in the rural schools in the EC.

SUMMARY

Based on the South African triple challenges namely: poverty, inequality and unemployment, the EC is one of the highly affected provinces due to its rural nature. In this context, the right to education has become indispensable and invaluable in a bid to substantially reduce poverty and to tackle the various socio-economic challenges that this province in particular, and the country in general faces. The eastern part of the EC was the Transkei homeland and was the least funded in terms of infrastructure, resulting in a substantial number of schools that are currently severely lacking the basic necessities for efficient and effective education provisioning. From

the research done, it is evident that the EC learners have been underperforming for many years, and focusing on whether the current infrastructure provision is adequate, has had a negative impact on both learner performance and violation of their basic right to quality education. A range of resources could potentially be used to make rural areas more economically vital and to select mechanisms that are most effective for improving and stimulating rural spaces and schools for enhancing the lives of learners, and eventually the rural economy overall. The government must ensure that every school is habitable and the beacon of hope in the rural communities. Adherence and commitment to this particular policy perspective is imperative. Future research could focus on a more longitudinal study through a mixed methods approach in an effort to obtain more extensive data on the status of infrastructure development and the impact on learners' potential to improve teaching and learning outcomes and improve the overall performance of learners; thereby enhancing service delivery in the educational context, to influence public policy decisions on this national imperative in the country.

NOTE

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The Ramifications of High and Abrupt Chief Executive Officers' Turnover in South Africa's State-owned Enterprises

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ABSTRACT

Organisational stability is a fundamental constituent of an enterprise, which is critical for the optimum existence of any state-owned entity (SOE). In recent years, many of South Africa's major SOEs have been impaired by unstable governance structures, particularly the Chief Executive Officer (CEO) position. Citizens as primary stakeholders have witnessed the massive and abrupt turnover of CEOs in critical Schedule 2 and 3B enterprises such as Denel, Eskom, Passenger Rail Agency of South Africa (PRASA), South African Airways (SAA), South African Broadcasting Corporation (SABC) and Transnet. This undesirable turnover has led to a state of affairs where boards and senior management of these SOEs deviate from the core production and service delivery mandate to constantly focus on the management of instabilities because of high CEO turnover. This article principally examines the ramifications of CEO's high and abrupt turnover across major South African SOEs. To arrive at the ramifications of the abrupt turnover, this article deliberates on the theoretical underpinning of the study, the roles of CEOs, factors influencing high CEO turnover in SOEs, and the possible course of action to remedy this. For the purpose of this article, the authors employed triangulation of various unobtrusive research methods and techniques. The methodological approach applied is qualitative desktop analysis through an intensive literature review where information produced has been scrutinised through categorisation, intellectual analysis, integration and reflection.

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INTRODUCTION

By their operational and technical nature, SOEs should be at the crux of driving the socio-economic agenda in the Republic of South Africa (Sithomola 2019:63). In an ideal state of affairs, SOEs have to fulfil the commercial and developmental mandate on behalf of shareholders (the state, equity partners and citizens). It is evident that the executive leadership in many of the major SOEs in South Africa had a shambolic tailspin between 2008 and 2019 (Corruption Watch 2018). The popular narrative among those who hold anti-commercial views on SOEs is that they must mainly cater for the social needs of the population with little or no sound consideration of their sustainability and financial viability.

Although the overall authority of governance, strategic direction, control and management of SOEs is primarily bestowed on the board of directors (accounting authority), CEOs as accounting officers (accountable to the boards) hold enormous responsibilities to ensure that the institution successfully pursues its commercial goals (Australian Institute of Company Directors 2016:2). CEOs are regarded as the nerve centre of the institutions that they serve. They are also instrumental in corporate homeostasis, which is imperative for the attainment of strategic, tactical and operational goals set by the board of directors in line with the overarching objectives of the institution. The implication of CEO turnover not only erodes optimum performance of SOEs through the erasure of institutional memory and loss of critical skills, but also intensely alters an enterprise's collective arrangements and continuity trajectory.

Despite the presence of a clear and potent statutory and policy framework, countless turnaround strategies and the SOEs Presidential Review Committee's comprehensive report, the monumental downward spiral of SOEs continues with little hope that they will soon recover and help South Africa to realise the outlined objectives of the National Development Plan (NDP) Vision 2030. These documents remain futile rhetoric since those who have been entrusted with them do not optimally implement them.

This article pays attention to, inter alia, a contextualisation of SOEs, CEO and executive turnover, the theoretical inclination of the study, roles of chief executives in SOEs, repercussions of high turnover and conclusions.

CONTEXTUALISATION OF SOEs, CHIEF EXECUTIVE OFFICERS IN SOEs AND EXECUTIVE TURNOVER

The term SOEs has been conceptualised and contextualised by a variety of public policymakers, scholars and strategic management practitioners. As such, a

discourse revolves around a universally acceptable conceptual clarification of the term SOEs. Many conceptual underpinnings capture the crux of this study.

According to the Organisation for Economic Cooperation and Development (OECD) (2015:14), an SOE can be defined as any corporate entity recognised by the national law as an enterprise and in which the state exercises ownership. Thus, the state presides over SOEs as the ultimate beneficiary and owner of the majority-voting stake or share (United Nations 2016:1). Kenton (2019) posits that "a State-Owned Enterprise (SOE) is a legal entity that a government creates to partake in commercial activities on the government's behalf". It can be wholly or partially owned by the state and conventionally assigned to engage in business activities in the economic sectors where the state wants to pursue its national development aspirations. The SOEs in this study are legal and commercial enterprises (Schedule 2 and 3B) with an obligation to maintain continuous corporate homeostasis as prescribed by the Public Finance Management Act 1 of 1999.

Although the vast majority of strategic SOEs in South Africa have been turned into the government's liability, which by extension implies a burden to dwindling numbers of taxpayers, it should be borne in mind that in other countries across the world, they have proven to be effective vehicles for development. For example, SOEs in countries such as China, Singapore, United Arab Emirates and Malaysia still continue to play a crucial role in the promotion of economic development, contribution to government's income to the fiscal needs of their respective states, infrastructure development and social development (Balbekova 2017:8–9; Sithomola 2019:67–68).

SOEs are set apart from line government departments as they are not only required to deliver services to citizens or clients but also are obligated to generate revenue from the products they produce and trade. They must maintain a high level of financial prudence and have the ability to reinvent themselves to keep up with contemporary demands, trends and markets. Governments, as shareholders (on behalf of taxpayers), invest substantial amounts of resources with an expectation that commercial SOEs will provide returns on investment to expand their operations further and contribute to the fiscal stability of the national treasury (Shirley 1983:3).

SOEs remain the bedrock of economic activities in both emerging and advanced economies across the world. Governments strategically positioned SOEs in imperative and critical sectors of the economy, such as telecommunications, transport, energy, financial services and infrastructure development. These corporations now account for about a fifth of the global largest conglomerates across the world. In contrast, in the early 2000s, only a handful of SOEs could be found in the league of the most successful and valued enterprises. The implication of this growth is that appropriate governance and

management structures are required to preserve corporate homeostasis to ensure that they continue to operate in pursuit of their commercial and strategic goals (OECD 2018:4).

Like any other private enterprise, SOEs serve an imperative role to serve the needs and aspirations of their clients. Business enterprises mainly focus on commercial activities such as increasing profit margins and maintaining their core assets. SOEs are also known for their continuous endeavours to pursue an increased value to maximise the welfare and satisfy the interests of their stakeholder or shareholders. To achieve these strategic goals, a management team led by a CEO with requisite skills and experience is required (Dayi and Esmer 2018:96).

Statutorily, SOEs must hire capable CEOs to lead the interests of the enterprises they represent. Conventionally, a CEO is the highest-ranking official/executive with an enormous responsibility to provide solid management to achieve institutional goals and maintain long-term sustainability. This implies that CEOs hold a central role in the day-to-day operations and existence of any functional public or private enterprise (Baltic Institute of Corporate Governance 2013:5).

Usually, CEOs derive their authority to manage an entity and its operations through delegation of authority from the board. Among other delegated responsibilities, a CEO has an obligation to develop business strategies, budgetary planning and detailed long-term plans for consideration by the board. Upon approval by the board, the CEO is responsible for the implementation of these strategies, budgets and plans in order for an institution to realise its commercial and long-term objectives (Australian Institute of Company Directors 2016:2).

CEOs are not only central to influencing the direction of the entities, boards, subordinates and capital markets. They are also capable of influencing the entire economic trajectory of countries and regions across the world. At the centre of the CEO's high turnover in SOEs is the high level of toxic political interference and undue influence in SOEs' operational and administrative environment. CEOs are, by nature, trained technocrats with a wealth of knowledge, expertise, skills and experience, which essentially enables them to devise the required strategies to improve the SOEs that they preside over. However, in the presence of political myopia and desire for short-term goals, politicians often pervert operational and administrative issues, and CEOs cannot realise their strategic objectives. Political interference becomes a prohibitive force as a CEO's autonomy is often seized by political interests and agendas of key political principals in the affected SOEs. Toxic political interference, in this instance, implies that SOEs are purposefully diverted from focusing on productivity, efficiency and generation of income to sustain their operations and existence to political performance that suits specific myopic political agendas (Liu and Zhang 2018:130; Dragota, Curmei-Semenescu and Moscu 2020:7).

An illustration of CEO turnover in South Africa's major SOEs (2008–2019)

The high CEO turnover in South Africa's Schedule 2 and 3B SOEs since the second half of the millennium's first decade has played a significant role in plunging these organisations into a precarious leadership conundrum. This high turnover has led to undesirable dimensions such as operational and financial instabilities, governance issues, low productivity, inefficiencies, low morale, and erosion of public trust that ultimately put the economy and social stability of the Republic on a knife's edge. While many sectors of society (business, citizens and civil society organisations) mainly focus on the financial ruins of these SOEs, which are undoubtedly highly important and worthy of public discourse, the high executive turnover in these institutions also warrants attention. The abrupt and forced exits of CEOs at Eskom, SAA, SABC, Transnet and Denel highlight one of the core factors that have severely limited the potential for continuity and meeting the developmental mandate of these SOEs. This implies that long-term strategies barely get implemented, leading to a phenomenon of perpetual turnaround strategies that often fail since they are anchored on unstable historical leadership (London 2019). Figure 1 illustrates the number of CEOs these SOEs have had between 2008 and 2019, the average stay on the post, and the shortfall per SOE.

Figure 1: Number of CEOs Between 2008 and 2019 (12-Year Period)

SOE Name	Number of CEOs (Period 2008–2019)	Average Tenure per CEO (2008–2019)	Average Shortfall per SOE
Eskom	12	1.00, on average, a CEO spends 1 year	4.00, represents a shortfall of 4 years
SAA	9	1.33, on average a CEO spends 1 year, 4 months	3.67, represents a shortfall of 3 years and 8 months
SABC	7	1.71, on average a CEO spends 1 year, 9 months	3.29, represents a shortfall of 3 years and 3 months
Transnet	6	2.00, on average, a CEO spends 2 years	3.00, represents a shortfall of 3 years
Prasa	5	2.40, on average a CEO spends 2 years 5 months	2.60, represents a shortfall of 2 years and 7 months
Denel	4	3.00, on average, a CEO spends 3 years	2.00, represents a shortfall of 2 years
Combined Total	43	1.7, on average a CEO spends 1 year 8 months	3.3, overall there is a shortfall of 3 years 4 months

Source: (Compiled by the Authors 2020)

This figure paints a grim picture for the taxpayers who expect good governance, stability, continuity and return on their investments. From 2008–2019, the aforementioned SOEs have had a total of 43 CEOs. The conventional term of a CEO in the context of South Africa's SOEs is a 5-year renewable term subject to performance during the first tenure. Based on the numbers in Figure 1, it is clear that the CEOs entrusted with the responsibility to lead these entities barely serve their terms beyond three years. For instance, Eskom has had a total of 12 CEOs from 2008–2019. This implies that, on average, each of the 12 individuals in the CEO position at Eskom served only one year. This leaves Eskom with a shortfall of four years. At the Judicial Commission of Inquiry into Allegations of State Capture, former Finance Minister Mr Trevor Manuel posited the leadership conundrum at Eskom has resulted in 12 CEOs, six board chairpersons, 60 directors and 30 executives in a space of 10 years. This high turnover resulted in enormous governance challenges, instability and the inability of this SOE to provide its core service (provision of electricity to power the economy and non-economic sectors of society). It is estimated that the taxpayers paid R514 million for the remuneration of these individuals and severance packages (for some) (Business Tech 2019).

SAA and the SABC also had an almost identical average CEO stay of about one year and four months, and one year nine months. These two SOEs also struggled with compliance with financial governance to the point where they failed to submit credible and reliable financial statements as required by financial laws and regulations (Standing Committee on Public Accounts 2019). Between 2017 and 2019, SAA completely failed to submit its financial statements to enable institutions such as the Office of the Auditor-General and Parliament to perform their respective auditing and oversight roles (Arnoldi 2019). Compliance with the laws and regulations requires a CEO to work closely with the board throughout their entire term. If CEOs and other executives are not staying put to see out their terms, it becomes an insurmountable task for any of these SOEs to comply with the laws and corporate governance.

On the other hand, Transnet, Prasa and Denel have had an average of between two and three years of their CEOs at the helm. The common denominator among these SOEs is that these institutions are in perpetual crisis management because, on average, their CEOs are not serving a full term in office.

Cumulatively, the data above also shows that these SOEs' CEOs (43 combined) only serve an average of one year and eight months. This tells us that these SOEs are unlikely to improve in terms of productivity, performance, stability and finances if there is continuous political interference in their affairs, leading to the premature exit of CEOs. If the CEOs are not serving their full term, who accounts to the board regarding the long-term strategies that those CEOs must implement? The answer is that accountability becomes a rare commodity in such an environment.

As such, instead of achieving their developmental goals, SOEs have been plunged into a vicious cycle.

THEORETICAL UNDERPINNINGS

To derive a theoretical understanding of the functioning of SOEs, diverse researchers have used a wide range of theoretical lenses and perspectives. These lenses *include agency theory, stewardship theory, New Public Management (NPM),* and shareholder value theory. For the purpose of this article, the authors have employed the vicious cycle theory as a lens to examine the crux of the identified research problem. This is inspired by the fact that this theory has not been comprehensively applied to topical governance, managerial and operational issues that confront SOEs in South Africa. As such, applying this theory signifies the missing link between the research conducted on SOE's troubles and other compelling systemic issues. Based on the recent executive instabilities plaguing major SOEs in South Africa, there is a need to scholarly interrogate the CEO turnover as a critical issue that exacerbates challenges confronting Schedule 2 and 3B enterprises.

The lens of a vicious cycle

The vicious cycle in an organisational context connotes a loop in which tensions are perpetuated and exacerbated, leading to counterproductive and undesirable short-term outcomes and long-term impacts. It is regarded as a multifaceted and complex phenomenon comprising a series of events and occurrences that reinforce itself through a feedback loop with detrimental results to the functioning of an institution. Thus, it creates an environment which is devoid of organisational equilibrium. It prevails in its cyclical motion and cannot be broken without systematic interventions (Es-Sajjage, Pandza and Volberda 2020:37).

In the context of this article, the vicious perspective anchors the identified research problem on the notion that abrupt and high turnover of executives in an organisation negatively disrupts institutional vision, mission, established routines and networks. In addition, forced CEO turnover impairs institutional performance, efficiency, productivity and morale among the workforce (strategic, managerial and operational employees are negatively affected by constant and abrupt departures of CEOs).

The vicious cycle in CEO turnover in the context of this article denotes a systemic organisational phenomenon where abrupt and frequent changes in the chief executive position within SOEs produce a cyclical and detrimental cycle that negatively impacts the sustainability of the affected public entities.

This self-reinforcing phenomenon often persists over time, leading to unsustainable widespread organisational failures and, ultimately organisational collapse (Sundaramurthy and Lewis 2003:398).

Abrupt departures of CEOs in SOEs have always resulted in the interim appointments of acting CEOs who are expected to guide these ailing entities without the authority to embark on long-term strategies until a permanent replacement is appointed. Studies show that acting appointees have always been associated with low or stagnant productivity and performance. The primary reason for low or stagnant productivity and performance revolves around the fact that the principal (government as a major shareholder) succession is arbitrary and merely a scapegoating ritual (Ballinger and Marcel 2010:218; Makoni 2015:20).

In the case where the turnover was due to the retirement of the CEOs, evidence demonstrates that the institutions they led often succeed due to proper transition processes and implementation of succession plans. In such organisations, there is continuity, underlying stability and normalcy as opposed to crisis management resulting from the forced exits of CEOs, particularly in SOEs. On the other hand, voluntary resignations are disruptive as they emerge without any form of anticipation. The forced removal of CEOs by the employer/firm can also result in organisational uncertainty. Forced resignations are ascribed to a wide range of negative short-term and long-term effects on an organisation. In the case of CEO's forced resignations, the principal and dysfunctional boards often struggle to manage the transition and maintenance of institutional stability of the affected SOEs. Ultimately, dismissals of CEOs are the most chaotic and disruptive if they emanate from the actions of the departing CEO (Rosse 2010:13–14).

Abrupt departures of CEOs also have detrimental effects on the organisational culture and institutional memory and exacerbate retention challenges. As the vicious cycle prevails, it becomes an insuperable task for the affected SOEs to attract and retain CEOs with the required skills and experience to turn around the strategic, governance, administrative, and operational failures. This implies that such SOEs will be heavily and negatively impacted in terms of their overall success (both strategic and operational).

In the case of South Africa's SOEs, the political principals (shareholding and policy ministries) have created an environment where top talents have been rendered ineffective despite their excellent track records, especially in the private sector. On the other hand, unsuccessful stints of SOE's CEOs with good track records also play a deterrent role by subduing the interest of top talent in other sectors. Most Schedule 2 and 3B SOEs' reputations have been compromised and damaged by the persistent culture of non-performance, toxic political interference, financial mismanagement, corruption, financial bailouts and government guarantees. These factors do not express a good outlook and an attractive organisational stature to attract and retain top talent (Sithomola 2019:72–73).

One of the most recurring themes that lead to the vicious cycle of CEO turnover in South Africa's SOEs is that the political principals do not give the bureaucrats that lead these SOEs (CEOs and boards of directors) the freedom to utilise their expertise to pursue both financial and non-financial objectives of the SOEs that they preside over. Many SOEs grapple with this challenge partly because of the lack of understanding around the principle of the politics-administration dichotomy. CEOs are unlikely to successfully lead SOEs in achieving effective and efficient service delivery if they do not have the autonomy to exercise their technocratic skills with continuous political meddling in the implementation and administration of strategic plans of SOEs (Budiman, Lin and Singham 2009; Apriliyanti, Dieleman and Randoy 2023:5).

An abrupt CEO's replacement creates a vicious cycle because it undermines organisational stability and alters organisational strategy, structures, and internal processes and procedures, which usually causes chronic non-performance and long-term sustainability challenges. This is attested by the study conducted by Hambrick and D'Aveni (1992:1445), where the research findings affirmed that top executive's abrupt departures from organisations are linked to the deterioration of their productivity and poor performance. Consider, for example, executive directors, non-executive directors (top management level), tactical managers (mid-management level), operations supervisors, and their subordinates (operational level); they are all distinct, however; they operate and co-exist with one another for the purpose of working towards the attainment of institutional goals (Auriacombe 2022:73–74). However, when there is a high turnover of top executives, the entire organisation is often adversely impacted.

While the vicious cycle perspective has not been extensively employed in the governance and management of SOEs, the authors believe that it is an apt theory that locates the central theme of this study (high chief executive turnover and its subsequent repercussion to corporate homeostasis that is required for optimum functioning and sustainability of any commercial entity). The crux of this study is that the authors opine that abrupt CEO turnover is one of the aspects that plays a negative role in the deterioration of major SOEs in South Africa. Chief executives are part of crucial institutional components. This implies that their abrupt discharge from their posts symbolises the removal of a component from the system where removing one element affects the required organisational stability. Corporate homeostasis has proven to be one of the absent features that ensure the stability and sustainability of SOEs in South Africa. Little research has been conducted through the vicious cycle theoretical lens to assess how abrupt executive turnover compromises the overall functioning and performance of SOEs.

CEOs in various SOEs should be viewed as nerve centres that head the management system within their respective enterprises. They are also charged with an obligation to support the policy and governance framework. They also play a

crucial role in the creation of institutional capability that aids in the attainment of institutional strategic goals (Bourne 2012). From the enormity of responsibilities entrusted to CEOs, as described above, it is evident that high CEO turnover is extremely detrimental to the optimum functioning of an enterprise.

ROLES OF CHIEF EXECUTIVES IN SOEs

Although the fundamental authority for governance, direction, management and control of an enterprise is statutorily vested in the board, the CEO plays an imperative role in administering the resources and assets of an enterprise within the dynamic internal and external forces that influence its operation and success (Australian Institute of Company Directors 2016:2; Bussin and Ncube 2017:2).

A CEO is conventionally the highest-ranking figure in a commercial institution. CEOs are entrusted with enormous responsibilities directly linked to an organisation's stability and potential success. This implies that they have a considerable obligation to sustain corporate homeostasis and the sustainability of the enterprises they lead. CEO's duties or roles can be viewed in a two-pronged chasm (strategic and governance role) where their focus underscores business strategy, investment, financing, control and risk management mechanisms, leadership and communication.

Strategic role

CEOs in both public and private enterprises are entrusted with the strategic role that revolves around crafting the purpose or vision for the enterprise, ensuring the maintenance of core competencies, advancing human capital, promoting efficient and effective institutional culture and establishing organisational controls. In essence, in the strategic role, the CEO assumes the roles of a coordinator, innovator, planner, vision setter, transformer, creator and helmsperson of institutional success on behalf of the shareholding and policy ministries and the board. The CEO must implement the adopted strategy and related organisational policies essential in pursuing organisational goals in the context of SOEs. In this role, CEOs must ensure they channel guiding policies and the overarching organisational strategy towards achieving commercial and non-commercial institutional goals. However, there must be a balance between these two competing goals, especially when it comes to revenue generation, which is central to keeping any enterprise sustainable and financially viable (Ademola and Adeniji 2015:53; Institute of Directors in Ireland 2020:2; Glick 2011:58). This implies that the set long-term objectives, formulated business plans must be aligned with government's long-term goals and policy position. In the context of South Africa's SOEs (especially Schedule 2 and 3B), their strategies must be tailored around the NDP 2030.

CEO's strategy development and implementation role is one of the prime tasks they are entrusted with. This makes them the architects and catalysts of organisational continuity, change and sustainability. However, to realise these critical organisational ingredients for success, CEOs must have some degree of autonomy, which is one of the fundamental elements to ensure that the strategies they have developed achieve their set objectives. In an environment where their autonomy is constrained over the organisational strategy, it is highly unlikely that they will succeed in this critical role (Gottschalk 2017:16).

Governance and compliance role

Governance and compliance are considered the mainstays for adequately running the organisation. In the context of Schedule 2 and 3B SOEs, the governance and compliance role of the CEO is assumed through corporate governance, which denotes the connection between the internal control mechanisms of an organisation and the general public's notion of the scope of corporate accountability. Thus, it is regarded as a set of rules applied to govern, direct and control corporations to ensure they are properly run and managed (Robinson, Onyeanu and Obodoekwe 2013:12).

In this role, CEOs are entrusted with the responsibility to develop management policies and guidelines that are fundamental for achieving their strategies and organisational goals. It should be borne in mind that such policies and guidelines still require the board's approval. These policies and guidelines give rise to institutional operating procedures and systems where the CEO is also required to oversee their implementation and compliance. Through these institutional policies, the CEO is able to ensure that there is adherence to social conventions, ethical standards and professionalism among the employees of the institution. In addition, the governance and compliance role requires the CEO to proactively identify, respond to, and manage the major enterprise risks of the institution and implement appropriate systems and procedures to mitigate such risks. Furthermore, this role requires the CEO to ensure the integrity of the enterprise's internal controls, management information systems and financial reporting. This role also enables the CEO to ensure that there is compliance with high standards of occupational safety, health, environmental protection and quality control (Cameco Corporation, n.d.).

In addition to internal controls, management protocols and procedures, CEOs are required to ensure that the enterprises they preside over comply with the government's statutory and regulatory framework applicable to the category of their organisations. In the context of South Africa, SOEs are governed and regulated by laws such as the *Constitution of the Republic of South Africa* of 1996, Public Finance Management Act 1 of 1999, Public Audit Act 25 of 2004, Companies Act 71 of 2008 and Treasury Regulations (Sithomola 2019:69–70) to name a few.

Leadership role

Conventionally, public and private enterprises draw motivation, influence and guidance from their CEOs. In this role, CEOs set the tone and define the organisational atmosphere on which the organisation bases its inputs towards achieving its long-term objectives. According to Mintzberg (1973:60), the tone of the organisation is usually sounded by its top executive, and the success of the enterprise may well depend on whether they infuse the whole hierarchy with energy and vision or whether, through ineptness or neglect, they allow the organisation to stagnate. The CEO's organisational leadership role involves interpersonal relationships between the CEO and those they lead. Among all the functions entrusted upon the chief executives in various corporations, it is clear that the most significant of all roles and responsibilities, leadership has received more scholarly and practitioners' attention than any other (Mintzberg 1973:60–61).

In this role, CEOs use their leadership authority as one of the critical factors to improve institutional performance. CEOs, through the powers vested in them by the board, are key decision-makers and are empowered to make decisions on matters relating to the acquisition, development, and deployment of organisational human and financial resources, conversion of these resources into valuable products and services, and the delivery of value to the institutional stakeholders. As such, they are considered vital sources of managerial and sustained competitive advantage (Avolio, Bass and Jung 1999; Rowe 2001:85).

A series of studies conducted around the role of CEOs in SOEs conclusively inferred that CEOs, through their leadership qualities, influence the overall performance of an organisation. Their leadership role affects the levels of productivity, creativity and innovation, success-driven organisational culture, learning organisations and the development of new products. The leadership role of CEOs is also one of the key job satisfaction indicators, as well as the organisation's financial performance (Rusli, Basri and Arafah 2020:100).

CEOs in this role are also responsible for motivating employees, making them more aware of their duties, and enhancing their interests in the organisation's performance and strategic goals. This process takes place in an organisational environment where leaders inspire through the interactive values of the organisation, which in turn influence the organisational confidence of the workforce within an organisation (Macanchian, Hussein, Noordin and Taherdoost 2021:59).

Stakeholder management role

Stakeholders are regarded as persons and institutions that have an influence or are affected by the activities that occur in an organisation. As such, CEOs must ensure that they pay attention to the legitimate interests of all relevant stakeholders.

Stakeholders influence an institution by exerting pressure on organisations to adapt to the ever-changing corporate environment where the CEO must take cues by adopting new work practices, processes and routines. The systematic interaction between the CEO and the stakeholders has positive effects on the organisation since stakeholders' demands play a role in advocating for products and service improvements (Konadu, Owusu-Agyei, Lartey, Danso, Adomako, and Amankwah-Amoah 2020:2312). These demands are essential for an organisation to realise improved innovation outcomes and overall organisational performance. Stakeholders impart knowledge and ideas that positively contribute to enhancing institutional efforts that are fundamental to organisational efficiency and processes. When CEOs assume this role, their interest is to pay attention to stakeholders' demands and wishes to build, maintain and sustain stronger institutions that can adapt to the complex and competitive enterprise environment. Studies show that CEOs meet and integrate stakeholders' demands into management practices in this role. The stakeholders' inputs become integral to institutional capability and competitive advantage (Donaldson and Preston 1995:67; Chiu, Hoskisson, Kong, Li and Shao 2023:2).

In the context of SOEs, CEOs have the responsibility to promote and uphold the enterprises' commitment to the provision of prompt, accurate and impartial disclosures of all material information about the organisation to its stakeholders. This implies that SOE's CEOs are required to ensure effective relationships are established and maintained with stakeholders such as the investors, government, shareholders, the general public, creditors, suppliers and clients (Benson and Davidson 2009:2). It is the responsibility of the CEO to ensure that the organisational vision, mission, principles, values and business plans are duly communicated with the relevant stakeholders. This role also requires the CEOs of SOEs to operate the enterprises they preside over to maximise the social welfare of a wide range of stakeholders and constituents (Cameco Corporation n.d.; Victorian Public Sector Commission 2022).

Monitoring and evaluation role

In addition to the roles explained above, the CEOs in SOEs are responsible for tracking, monitoring and evaluating the organisation's progress towards attaining its strategic objectives. These include, among others, measuring progress on aspects such as commercial and non-commercial objectives, financial and operational results, material risks, mitigation measures, employees' performance, governance and the overall sustainability of the organisation (OECD 2022:18). As such, the CEO has to ensure that there are effective monitoring and evaluation mechanisms that are an integral part of the feedback system across all the levels of the organisation. At the core of this role is the notion that there are tremendous

advantages in measuring the progress and the results of the organisation. If the organisation does not leverage monitoring and evaluation, it cannot tell success from failure, it cannot learn from it, it cannot correct it, and it cannot attract public support (Osborne and Gaebler 1992:147). This implies that CEOs have a role in ensuring that they establish remedies and interventions to employ in order to advance any performance aspects that need improvements.

CEO's understanding of their enterprises' performance relative to other competitors is one of the mainstays of their role. This role is fulfilled through measuring key performance areas of an organisation. Thus, actionable insights can be derived from revenue generation, gross financial margins and cumulative sales of goods and services. This process is also instrumental in guiding the required adjustments and, assisting the organisation in achieving its targets and assists the CEO in gaining insights concerning the current trends in the industry and the market, whether that entails potential acquisition or major regulatory developments. Monitoring the organisation's performance allows the executives to devise measures that could be used to withstand both the internal and external dynamics that influence the trajectory and progress of the organisation towards achieving its long-term objectives (Tsien 2020).

REPERCUSSIONS OF HIGH AND ABRUPT TURNOVER

There is a wide range of costly consequences that are associated with abrupt and forced CEO turnover in South Africa's major SOEs. The consequences that confront SOEs due to a high CEO turnover include dimensions such as erosion of human capital, golden handshakes, loss of institutional memory, shambolic succession and transition, negative impact on service delivery and destabilisation of staff morale.

Erosion of human capital

One of the central consequences of abrupt and forced turnover is the erosion of human capital, especially in cases where competent CEOs are forced out through unwarranted political interference. Studies have shown potent evidence that the departure of a CEO creates an organisational vacuum that is usually followed by a snowball effect where other senior managers of the institution tend to leave the institution (Rosse 2010:9). In addition to the erosion of human capital, where skills, experience, knowledge and experience are lost, turnover also implies that there must be a fresh recruitment process that comes with a financial commitment attached to it. Recruitment would imply searching for recruits that are fit for purpose but also implies high training costs. This represents an opportunity cost in

the sense that those resources could be invested elsewhere (Saher, Khan, Shahzad and Qadri 2015:24). Human capital erosion also implies that social capital fabric and networks that have been built over time are also negatively affected by a wide range of interdependent groups as systems theory suggests. This is because CEOs play a linking role in connecting a wide range of key units (ranging from the board, executive team, tactical managers and operational team) (Rosse 2010:9).

Based on the vicious cycle standpoint, departures of CEOs destabilise systematic routines and workflow. It is also capable of putting a strain on the morale of other employees within an institution. Ultimately, productivity and efficiency are compromised (Rosse 2019:9). High CEO turnover in South Africa's SOEs has also led to a negative impact on human capital retention. Abrupt departures of CEOs in SOEs bring about instabilities and uncertainties where other staffers at all levels develop a sense of insecurity and also opt to leave these institutions. Loss of human capital triggered by high turnover also leads to the compromised performance of these enterprises (operationally and financially). This puts the entire country at risk since some of these entities are entrusted with exclusive and monopolistic sectors such as electricity (Eskom) and railway network management (Transnet). This implies that such SOEs are unlikely to build and retain the required capacity to deliver on their overarching developmental mandates. Human capital erosion in South Africa's major SOEs places them in a chronic underperformance and unsustainability mode (United Nations 2021:10–11).

Golden handshakes

According to Johannsen and Page (1980:197), "golden handshake is a colloquial term for severance pay given to a senior executive on termination of his/her contract of employment or cutting short his/her contract of service". Severance packages as a result of high CEO turnover in South Africa's major SOEs is one of the dimensions that provoke public outrage regarding the manner in which the government appears to be engaging in reckless and fruitless use of public resources. Enormous amounts of taxpayers' money in the form of golden handshakes are paid to the departing CEOs. The public views this as rewarding individuals who are poor performers or who are being pushed out for their independence in executing their duties (Mtwesi 2016).

The Labour Relations Act 66 of 1995 is categorical on severance benefits of an employee who has been dismissed for reasons based on the employer's operational requirements (Labour Relations Act, 1995:159). Although Section 196 of this Act makes provision for employees to be paid a certain amount of severance pay based on the number of years of service in an institution, there seems to be a concerning trend of unnecessary and excessive golden handshakes in many SOEs in South Africa.

In numerous instances, these handshakes directly emanate from the botched application of labour laws processes by the affected SOEs. The popular trend among various SOEs follows a suspension process, commissioning of an inquiry (which in some cases is terminated prior to completion), a disciplinary hearing process and ultimately, lawsuits. In between these processes, technical and procedural flaws are bound to transpire, resulting in the payment of unwarranted huge sums of money to individuals (Schoeman 2015). The most worrying issue concerning these golden handshakes is the fact that they are squarely funded by the taxpayers, not by the boards, policy ministry or shareholding ministry. Severance payments present a serious opportunity cost to the affected SOEs. This essentially implies that scarce public resources in the form of cash payments to embattled chief executives are put to wasteful or unproductive use at the expense of taxpayers, who ultimately foot the bill (Tanzi and Prakash 2000:3).

Based on the Public Finance Management Act (PFMA) 1 of 1999 prescriptions, Section 51 (c) states that the accounting authority (in this case, the board) is responsible for the management, including safeguarding the assets and management of revenue, expenditure and liabilities of the public entity. However, due to endless unwarranted severance packages paid out to multiple former CEOs, it can be inferred that the collective accounting authorities are not honouring Section 51 (c) of the PFMA (Public Management Act 1999:24).

Loss of institutional memory

Institutional memory is the collected body of data, information and knowledge created during an individual's tenure within an organisation (Anand and Singh 2011:926). Institutional memory serves as an instrumental tool of knowledge essential for the existence of an organisation (it is an important element that guides organisational operations, human resources, financial resources, and organisation-client relations, as well as the infrastructure). Institutional memory is created, refined, kept and recovered or retrieved by organisational members (Dunham and Burt 2014:127; Karreman 2016:3). Whenever there are institutional instabilities and high turnover of the institutional memory keepers, organisations are often exposed to loss of institutional memory. High organisational executive turnovers are associated with a significant loss of institutional memory. Lahaie (2005:36) argues that with the departure of CEOs or senior executives in an institution, there is a loss of institutional continuity echoed in an increased possibility for the loss of significant institutional memory, explicit and tacit knowledge and reduced competency levels.

South Africa's major SOEs are perpetually confronted with the phenomenon of institutional memory loss triggered by the mass exodus of senior executives,

particularly the abrupt departures of CEOs. This implies that the high CEO turn-overs also play a negative role in derailing SOEs from focusing on their core mandate of socio-economic development, thus threatening the very idea of South Africa becoming a successful developmental state (Dzenopoljac, Alasadi, Zaim and Bontis 2018:77; Phaladi 2021:2). In addition, South Africa's high executive turnover in major SOEs adversely affects the knowledge transfer process as well as retention of such knowledge which is essential for any organisation's success. It is evident that institutional memory loss within the context of SOEs in South Africa continuously plagues their already compromised performance and sustainability to deliver on their developmental obligations (Phaladi 2021:5).

Shambolic succession and transition

Acquiring a suitable successor to replace the outgoing executive is often a tricky process, especially in the position of the CEO. It is one of the most difficult challenges because it is the organisation's most complex position and has the most far-reaching consequences for the organisation. Thus, the board has a crucial role in ensuring that the succession and transition process maintains a high level of staff well-being, clients, suppliers and shareholder relations. In both private and functional public enterprises, the conventional approach in which CEOs are replaced is through a well-planned and executed succession and transition process facilitated by the board and the outgoing CEO. Globally, about 68% of the succession and transition process is handled in this manner. Moreover, the well-planned succession and transition process is also beneficial to the institution as it produces the best financial and operational results and organisational continuity. When the successor ascends to the top organisational role through a harmonious transition, the organisation is unlikely to experience unexpected shocks that may expose it to unnecessary risks and uncertainties (Ciampa 2021).

Research on organisational succession planning and transition conclusively found that many companies (private and public enterprises) have experienced some failures in planning a CEO's succession and transition. These failures are associated with high financial costs and poor performance. Almost all South Africa's major SOEs have experienced shambolic succession and transition on multiple occasions. This is because it would be impossible to action any form of a succession plan if there is a high turnover of CEOs in these organisations. Succession plans are only practical in an environment where the incumbent CEOs serve their entire terms. However, in the context where CEOs depart at an early stage after the commencement of their tenure, it becomes impossible for any succession plan to be implemented successfully. The culture of a shambolic and flawed transition process has created a trend of leadership vacuum and instabilities within most

of the Schedule 2 and 3B SOEs in South Africa. This trend has also exacerbated the lack of confidence from taxpayers who expect meaningful returns on their investment in the form of goods and services that these failing SOEs are entrusted to deliver (Makoni 2015:16).

Early departures of CEOs in these SOEs have also led to an unproductive trend of interim CEOs. If there were is no early and abrupt departures of CEOs in these entities, proper implementation of succession plans and transition processes would occur, thereby providing certainty, stability, continuity, and overall organisational performance and productivity. Multiple empirical research findings show that interim CEOs often fail to achieve most of the tasks set for them by the board. Ballinger and Marcel, in their 2010 study, found that the outcomes of the culture of appointing interim CEOs perpetuates the already volatile organisational performance and is thus an inferior *post hoc* solution to corporate leadership challenges (Ballinger and Marcel 2010:218; Makoni 2015:20).

Negative impact on service delivery

SOEs play a vital role in South Africa's economy as they are responsible for supplying the infrastructure and services on which the economy relies. This involves energy production, water provision, freight and logistics, commuter transport and telecommunications. High turnover of CEOs among major SOEs implies that instead of being at the forefront of economic and social transformation and development, they are often entangled in managing governance instabilities as a result of perpetual and untimely departures of key executives (Chitiga-Mabugu, Maisonnave, Henseler and Mabugu 2021:32). According to Business Wire (2023:1), some of the state's major and most essential SOEs have not met their obligations due to below-par performance and need regular bailout from the government. Over the past two decades, the government has spent over R 308 billion bailing out and recapitalising SOEs. Most SOEs depend on government bailouts to stay afloat, and nearly all are incapable of functioning well and are a risk to the economy as they are not economically sustainable and fail to maintain the infrastructure they are responsible for. The instabilities in the position of the CEO are also partly responsible for service delivery deterioration that most of the major SOEs in South Africa have been contending with since the second half of the first decade of the millennium. This is evident in the delivery of essential services such as electricity (Eskom failures), transportation (Transnet's inability to operate optimally), and the South African Post Office (inability to render effective services). The situations for these entities might have been somewhat different if CEOs had not been forced out, mainly due to political interference in their operational affairs. Thus, the absence of CEOs who see out their terms of office also exposes these organisations to high levels

of corrupt activities, nepotism, money laundering, cronyism and fraud, which are some of the elements that lead to impaired governance and the inability of these major SOEs to deliver on their core mandates (Mlambo, Ndlovu, Thusi, Mathonsi and Mkhize 2022:331).

Destabilisation of staff morale

Staff morale is a state of mind that echoes interest, zeal, satisfaction, happiness, and a content attitude towards one's work. It is believed to be the driver of efficiency, as content staff are expected to perform optimally. When staff morale is high, the organisation attains its highest ability in terms of its business and profitability (Killingsworth and Gilbert 2010:934). Morale disturbs the well-being of workers, influencing the quality of office performance, labour efficiency of workers, quality of work life and ultimately productivity of business enterprises. The importance of employee morale cannot be underrated. Empirical research on the significance of employee morale has also suggested that high-morale organisations produce better results, are more balanced, have enhanced labour production and have mostly happy workers (Masilela 2018:3).

The abrupt CEO departures undoubtedly affect the entire staff component in one way or the other. As such, it can be inferred that high CEO turnover triggers significant upheavals in both private and public entities. The uncertainty emanating from the sudden departure of the CEO has some psychological effects on the employees of any organisation. Consequently, high CEO turnover is believed to have detrimental effects that are responsible for diminishing staff morale that emanates from the potential instabilities of CEOs exiting their posts. Ultimately, low morale triggers low productivity, job dissatisfaction, workplace unhappiness and, in the end, staff turnover at all levels of the organisation. These dimensions eventually lead to employees deciding to leave the firm, often exacerbating disruption and lack of continuity within an organisation. This puts the affected organisation in a precarious, volatile and low-performance situation (Tao and Zhao 2019:63–65; Berns, Gupta, Schnatterly and Steele 2021:380).

The importance of employee morale is one of the elements essential for organisational success. It can be inferred that in the current CEO's perpetual changes within South Africa's Schedule 2 and 3B SOEs, there are undoubtedly high levels of low morale, which affects the well-being of employees, influences the quality of their performance, and ultimately, the quality of their work life as well as their personal lives. For example, Denel's leadership conundrum led the institution to a dysfunctional state where workers were not paid for a period of two years. Such an environment does not inspire staff morale and retention of top talent (Mabindisa and Legoabe 2021:87; Defence Web 2022).

CONCLUSIONS

It is clear that SOEs across the world play a critical role in advancing the socio-economic aspirations of governments and their respective stakeholders. Thus, governments continue to invest in SOEs in crucial and strategic sectors such as transport, communication, energy, financial services, health and infrastructure development. In countries (China, Malaysia, Qatar, Singapore and the United Arab Emirates) with proper management, corporate stability and governance, SOEs have proven worthy of the investments governments have made to achieve their developmental goals. In pursuit of these goals, CEOs are perceived as the nerve centres of the success of the SOEs they lead. Based on the crux of this article, it can be inferred that CEOs play an essential role in setting the tone and implementing long-term strategies for their organisations. The high turnover in South Africa's Schedule 2 and 3B SOEs has resulted in various dysfunctionalities, such as operational and financial instabilities, poor governance, low productivity, inefficiencies and erosion of public trust. At the centre of the high CEO turnover in this study's selected SOEs is toxic political interference in governance and operational and management issues, which in most cases leads to the early removal of key executives essential for corporate homeostasis. The high turnover trend in South Africa's major SOEs has created a volatile corporate environment devoid of organisational stability and derails the affected institutions from realising their core mandates. This trend has also immensely contributed to the erosion of human capital, loss of institutional memory, shambolic succession, poor service delivery and low staff morale.

These turnovers have resulted in a vicious cycle phenomenon that has proven counterproductive and has plunged SOEs such as Eskom, Transnet, SABC, Denel and Prasa into widespread governance failures and inefficiencies. CEOs are entrusted with various complex roles ranging from strategic, governance and compliance, leadership, stakeholder management and monitoring and evaluation. The importance of these roles requires a stable corporate environment that enables the CEO to serve the full term in office. In the absence of corporate stability and governance where CEO turnover is high, the likelihood of optimally fulfilling this role is very low. As such, there must be a proper succession planning and transition process to avoid the high turnovers in these SOEs to ensure a harmonious handover and smooth transition. However, to achieve this, politicians must cease interfering in these SOEs' technocratic, management, administrative, and operational matters. This implies that political leaders in both shareholding and policy ministries must solely focus on their constitutional oversight mandate without overstepping their authority. Such a positive environment will likely allow CEOs to realise organisational goals and freely fulfil the multiple roles entrusted to them.

NOTE

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Assessment of the Results-based Monitoring and Evaluation Policy Frameworks in Namibia

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ABSTRACT

The Namibian government has made progress towards adopting a whole-of-government, results-based monitoring and evaluation (M&E) approach as reflected in various policies and strategies. However, challenges remain in the implementation of these policies to embed strong M&E practices in all offices, ministries and agencies (OMAs). The study adopted a case study design focused on the Namibian policies and guidelines for established effective M&E systems. This article reviews available academic literature as well as studies by the World Bank, the UNDP and the OECD to identify the characteristics of effective M&E systems. A review of the policy and strategy framework adopted by the Namibian government informed a qualitative assessment that compares the current practices in Namibia to the characteristics of effective M&E systems. The article concludes that while each country should adopt an M&E system aligned to their context, the Namibian M&E system can be strengthened by focusing on the identified success factors to strengthen existing practices and enable successful institutionalisation of M&E across government OMAs.

INTRODUCTION

Results-based M&E (RBM&E) has gradually become an essential and regular component of the policymaking process in all spheres of government. Thus, numerous countries and public entities have established M&E in government. In addition,

many governments are working towards improving their M&E systems so that the performance management (PM) supports and guides policymaking and management (Segone 2008:36–37). Recent reviews by the Organisation for Economic Co-operation and Development (OECD), the United Nations Development Programme (UNDP) and the World Bank documented the ongoing practices in institutionalising M&E systems across various governments. Some systems are embedded in legislation, while others are guided by the financial systems or the performance plans adopted to pursue results (Rabie 2010:3; Lopez-Acevedo, Krause and Mackay 2012:169–193).

This article first compares then subsequently assesses Namibia's M&E policy frameworks against similar practices in selected countries. The article reflects on the strengths and weaknesses in the current M&E frameworks for RB M&E practices in the Namibian government to identify areas to be strengthened to support the institutionalisation of M&E in all OMAs.

The article utilised a case study design focused on the Namibian policies and guidelines for established effective M&E systems. A review of the available academic literature was complemented by studies commissioned by the World Bank, the UNDP and the OECD that document international practices in government M&E systems. This informed the identification of characteristics shared among the M&E systems adopted by different countries. The literature review proceeded to identify promulgated Acts and extract the implication for M&E systems, procedures and practices in the government of Namibia. This was complemented by a review of the various strategies and frameworks that set out the priorities for government performance and, as such, the focus for the M&E systems adopted. A qualitative assessment was undertaken to compare the current practices in Namibia to the characteristics of effective M&E systems identified. The analytical tool called LEADS which is comprised of a 4-point scoring scale adopted from Rahat and Holvoet (2016:41) and refined based on the characteristics and criteria of an effective M&E system was used in this assessment to guide collection, collation analysis, and comparison of data. This comparison informed the identification of strengths and weaknesses in the current system that may impede the successful institutionalisation of M&E across the government as a whole.

RESULTS-BASED MONITORING AND EVALUATION

The significance of M&E in advancing developmental goals has been acknowledged across different spheres of the global agenda. M&E serves as a valuable instrument for combating corruption within public institutions by fostering a culture of positive performance (Kanyamuna 2019:34), leading to improved policy planning, budgeting, and implementation processes. Government entities at various

levels are actively developing and institutionalising RBM&E systems to enhance accountability and safeguard their citizens' welfare.

Results-based management embodies a distinct managerial approach with a well-defined framework and a comprehensive tool for strategic planning, performance M&E, and management. Its primary objective is to gauge and effect substantial shifts in the operations of organisations (Kanyamuna 2019:63). Results-based management serves two principal functions: first, to fulfil accountability responsibilities through performance reporting, and second, to enhance organisational learning (Wongtschowski, Oonk & Mur 2016:2; Mackay 2007:15; Meier 2003:8).

A RBM&E system helps planners to develop a management plan for achieving the results specified in the logic manner (Farrel 2009:14). It focuses on measuring the anticipated outcomes of a policy, programme or project (Kasule 2016:35). RBM&E entails both monitoring the implementation progress and evaluating the programme's outcomes (Morra Imas and Rist 2009:108). A RBM&E system generates information grounded in evidence to inform critical management processes, including planning, targeting, budgeting, and expenditure allocation for policies, programmes, and projects (Kanyamuna 2019:64; Kardava 2015:4). Monitoring tracks progress against the adopted plan to ensure adherence to set deliverables and targets, whereas evaluation prospectively or retrospectively assesses how well the outcomes will or have been achieved (Rabie and Goldman 2014:5–6). Effective M&E plays a critical role in a results-based management system to improve policy planning, budgeting, and implementation processes and to strengthen accountability and performance. Effective M&E can improve service delivery, response to needs and priorities, effective use of resources and the achievement of high-performance results (Masilo, Masiya & Mathebula 2021:12,15).

Government entities at various levels are actively developing and institutionalising RBM&E systems to enhance accountability and safeguard their citizens' welfare. The challenge is how to apply results-based management systems in the public sector in a manner that maximises benefits and minimises potential negative consequences (Rabie and Goldman 2014:21). Challenges in this process may include a lack of ownership, poor planning, unrealistic budget and time frames, insufficient data, difficulty in determining cause and effect relationships given the integrated nature of development programmes, and using results within a politically contested system (Rabie and Goldman 2014:23–24). The next section will focus on the requirements for establishing effective M&E systems.

REQUIREMENTS FOR EFFECTIVE M&E SYSTEMS

M&E systems provide governments with critical information that enables accountability, improved decision-making and developmental results for citizens (OECD

2020:3). The sustainability of the M&E practices introduced depends on whether there is a consistent demand for M&E in relevant policies and procedures, supported by clear roles, responsibilities and accountability, and strong technical capacity and incentives to provide trustworthy and credible information (Kusek and Rist 2004:152–154; Görgens and Kusek 2009:3; De Coning and Rabie 2014:259–273). When designing and adopting an M&E system, the aims, processes and procedures adopted should consider pragmatic factors such as the financial, information and human resources implications, as well as the political considerations that influence the demand and use of evidence produced by the M&E system (Rabie 2019:34). Technical and managerial capabilities, incentives and sanctions, and the establishment of reporting and information-sharing platforms are further vital elements that enable the sustainability of the M&E systems adopted (De Coning and Rabie 2014:273; Kimaro 2018:97; Mackay 2007:61; United Nations Group 2012:20).

Institutionalising M&E systems entails the establishment of patterns and structures to enable sustainable behaviour. It ensures that ad hoc M&E efforts are coordinated into more formal and continuous processes that better serve the information needs of the government decision-makers (Rabie 2016:93). Leadership has influence and plays a critical role in how M&E information should be generated and used (Molapo 2019:25). Effective M&E systems require committed political and administrative leadership that demands and uses information, but even a single powerful champion (such as a minister or senior official) can initially play a critical role to lead and advocate for the establishment of systems and procedures and the allocation of the required resources (United Nations Group 2012:12; Kusek and Rist 2004:2). While this can initiate the institutionalisation of the M&E system, the sustainability of the system depends on the creation of a shared supportive organisational culture that engages with available evidence to learn and enforce accountability, even when such evidence is contentious. Leadership plays an important role in ensuring that unfavourable M&E evidence is embraced and learnt from to further promote the desired outcomes and impact.

A recent OECD review (2020:5) again found that countries adopt different approaches to strengthen the production and use of M&E information. There are, however, some characteristics shared by countries with more effective M&E systems, as discussed in the subsections below.

Institutional capacity and commitment to M&E

Creating institutional capacity plays an important role in strengthening M&E practices. A well-located institution with a dedicated responsibility to coordinate M&E activities can promote the production and use of high-quality M&E information. In various OECD countries, the centres of government departments often adopt this critical role. In a review of the M&E systems of Australia, Canada, Chile,

Colombia, Mexico, South Africa, Uganda, the United Kingdom and the United States of America, Nshimyimana (2023:80–82) found that the locality of the M&E system also plays a vital role in the successful implementation and sustainability thereof. It is suggested that a country's M&E system should be led and managed by a central government or principal sectoral agency (Mackay 2007:56; Bamberger 2008:12; Mugxaso 2015:26). Countries such as Chile, Australia and Canada accommodate their M&E systems under the Ministry of Finance or Planning (World Bank 2008:24) whereas South Africa coordinates the national M&E system from the Department of Performance, Monitoring and Evaluation located in the Office of the President (or Presidency) (Rabie 2010:15, 2011:184; Mugxaso 2015:28; Makadzange 2020:14). Locating M&E in a powerful institution with an influential champion demonstrates the importance of M&E and can encourage buy-in by sectoral ministries, donors, and other key stakeholders.

While the centres of government institutions play a critical role in promoting national-level policies, procedures and resources for M&E, a whole-of-government approach requires political and senior executive champions in all departments. These change agents need to promote the benefits of the M&E system and inspire and enforce the use of M&E information for decision-making, programme improvement and strategic planning. Within each department, the manager or accounting officer should create an enabling environment by ensuring the availability of the budget and other resources required to effectively build and maintain an M&E system.

Dedicated M&E policies and legislation

Policy and legal frameworks provide principles and strategic direction to M&E endeavours by providing high-level guidance and clarity for institutions (OECD 2020:3). Policies and legislation also set up the mandate and resources for the adoption of the M&E system in government departments and programmes. The M&E policy and laws articulate the requirements for M&E systems to be in place (Makadzange 2020:163) and ensure that the M&E system is aligned with the country's goals, objectives, strategies and priorities. When policies, legislation and directives are in place and accompanied by well-defined procedures and methodologies to ensure the quality of information production, they are communicated and used (Bamberger 2008:12; Mugxaso 2015:26). Nshimyimana (2023:84) found that Mexico, Canada and Australia have government-wide policies focused on M&E; while in countries such as Colombia, the M&E system is built on constitutional obligations (Nshimyimana 2023:78). The OECD survey found that 29 countries, including Chile, Norway, Poland and Slovenia, have developed a legal basis for evaluation, while 21 countries, including Estonia, Japan, Korea, Colombia and Costa Rica, adopted policy principles and specific guidelines to organise policy evaluation across a sector or whole of government (OECD 2020:20–27). Adopting a legal framework

that enforces M&E can facilitate a greater impetus to dedicate financial and human resources to M&E to ensure consistency and adherence to prescribed processes. In contrast, a policy-driven approach allows greater flexibility in adjusting to specific information needs, data availability and institutional capacity, which may increase buy-in, acceptance and a learning, rather than a compliance approach to implementation. However, commitment to implement M&E may be lower which may limit the performance benefits that can be attained through consistent application.

Capacity and methods to continuously track performance and results

Government institutions and non-governmental organisations need to develop the capacity of staff to collect, collate, analyse and interpret data to ensure that they have the technical and resource capacity to deliver reliable and quality information throughout the decision-making cycle (Boadu and Eresia-Eke 2019:539–540). Training and mentoring support can be outsourced to private or tertiary sector education providers, or insourced where the organisation has sufficient and appropriate capacity to mentor and train new M&E staff. Financial resources should be sufficient to cover the cost of planning and implementing the M&E system. These should include the budget for developing plans, guidelines and a database, buying software and equipment, paying salaries for personnel, and paying for training and capacity development, and other M&E-related events (DeLoG Secretariat 2015:16).

M&E staff should have the skills and knowledge to support M&E system design, information flow, database development, indicator development, the verification of the credibility of information, the skills and knowledge to implement monitoring and conduct evaluations and the ability to operationalise and use results produced through the system. A critical mass of staff with the expertise and skills needed to execute the M&E functions is needed to consistently produce relevant, trustworthy and timely information on the performance of policies, programmes and projects (Matsiliza 2019:496). Besides building the capacity of staff members, building the skills of internal and external stakeholders and encouraging them to provide inputs provides valuable feedback that can be used to improve accountability, performance and learning (Njama 2015:25). Active engagement in M&E and decision-making processes enhances the accuracy and relevance of the results and promotes a sense of ownership among stakeholders (Save the Children 1995:16; O'Sullivan 2004:25).

Reflection on and use of performance information for accountability and improvement

One of the essential success factors for developing and sustaining an M&E system is to produce and use M&E information (Lopez-Acevedo *et al.* 2012:26; Mackay

2007:27–28). Intensive utilisation of M&E information that meets the standards for quality data and evaluation reliability throughout the policy or policy cycles is one factor contributing to the effectiveness of M&E systems (Lopez-Acevedo *et al.* 2012:28). An effective M&E system should have good quality performance and findings from evaluations for decision-making, accountability and transparency purposes (Mackay:2007:11). It should also be able to inform decisions on which programmes to evaluate, what data to collect and how data should be shared and reported. Information from the M&E system can improve government performance (Mackay 2007:15; Goldman *et al.* 2018:1), but requires enforcement, remedial actions and consequence management to hold managers accountable for the attained results.

In a review of the M&E systems of Australia, Canada, Chile, Colombia, Mexico, South Africa, Uganda, the United Kingdom and the United States of America, Nshimyimana (2023:85) found that Uganda utilises evaluation information to inform resource-allocation decisions in the budget process, to assist ministries during policy formulation and analytical work, to inform ongoing management and delivery of government services, and to underpin accountability relationships.

These components of effective M&E systems provide a useful basis for assessing the current system in Namibia.

The next section will summarise the policy framework for RBM&E in Namibia, followed by the final section that assesses and offers recommendations on the status of the current system in terms of these criteria.

NAMIBIAN POLICY FRAMEWORKS FOR INSTITUTIONALISING M&E

The foundation for the RBM&E in Namibia's public sector is guided by the constitutional and legislative frameworks, including the 1990 Constitution of Namibia; the Namibia Institute of Public Administration and Management Act of 2010; the National Planning Act of 2013; the Statistics Act of 2011; the Public Service Commission Act of 1990; the State Finance Act of 1991; and the Public Procurement Act of 2015. Furthermore, Vision 2030, further unpacked in the fifth National Development Plan (NDP 5), Namibia's medium-term expenditure framework and the *Harambee Prosperity Plan*, provides the framework for planning and measuring performance results across various sectors.

Table 1 summarises the legislation that set the foundation for the M&E system, followed by a discussion of key guidelines and frameworks that inform the development of the M&E system. The subsequent assessment of the strengths and weaknesses of the Namibian M&E system will use these policies and frameworks as a basis.

Table 1: Namibian legislation relevant to public sector M&E

Legislation	Relevance for M&E
The Constitution of Namibia of 1990	Provide for the roles and responsibilities linked to the M&E outcomes-/results-based approach and indicate that M&E is a joint responsibility among political and executive leaders. The Head of State directs, coordinates and supervises the activities of ministries, agencies and state-owned enterprises to ensure the efficiency and effectiveness of government and parastatals' policies and programmes and reports on past policy performance. Cabinet members (president, vice-president, prime minister, deputy prime minister and ministers) must provide feedback on questions related to policies and programme performance. Executive directors from different government departments are accountable to the Prime Minister for the efficiency and effectiveness of public service delivery.
Namibia Institute of Public Administration and Management Act 10 of 2010	The National Institute of Public Administration and Management (NIPAM) is tasked with developing appropriate M&E training modules; building M&E capacity among public servants; and assisting in organising seminars, workshops and learning events to share M&E knowledge and skills (Republic of Namibia 2010).
National Planning Act 2 of 2013	Provides for the National Planning Commission (NPC) which is specifically tasked with developing M&E mechanisms to effectively implement the national development priorities. This includes providing leadership to coordinate monitoring, evaluation and reporting; establishing coordination structures and mechanisms for M&E; monitoring the implementation of the national M&E framework; developing a M&E plan for the National Development Plan; providing M&E standards and support to institutions to develop sectoral plans; and the periodic submission of reports on government-wide performance and results to Cabinet.
Statistics Act 9 of 2011	The Namibian Statistics Agency represents the statistical authority of the state for collecting, producing, analysing and disseminating official and other statistics. The Statistics Agency is responsible for ensuring the production of quality data and the availability of information for measuring the national priorities outcomes. Provides a quality assessment framework to assess and validate the quality, accuracy, reliability, timeliness, objectivity and completeness of collected data by various state institutions. Statistics play a vital role in shaping policies, driving development, fostering accountability, and facilitating evidence-based decision-making in the country.

Legislation	Relevance for M&E
Public Service Commission Act 2 of 1990	Mandates the Public Service Commission (PSC) to provide support and guidance relating to the establishment and approval of M&E units in government institutions. The PSC is the custodian of the public management system, which includes performance and knowledge management and service delivery improvement. Investigates and advises the president and government on matters related to public services. Ensures adherence to government policies, directives, regulations and ethical standards, as well as fairness and transparency within the public service.
Public Procurement Act 15 of 2015	Promotes integrity, accountability, transparency, competency, effectiveness, efficiency, fair dealing, responsiveness, informed decision-making, consistency, legality and integration in the procurement of assets, works and services. Mandates the Ministry of Finance's Public Management Unit to monitor and evaluate public entities and suppliers on public procurement matters to ensure compliance; investigate non-compliance and offer recommendations; and report on the performance of the public procurement system.
State Finance Act 31 of 1991	Mandates the Ministry of Finance to collect information related to the resources, implementation and results of public sector programmes to support planning, budgeting, implementation management and accountability. Monitors expenditure and execution matters versus performance and results as set out in the medium-term expenditure framework. Promotes efficiency, effectiveness, equity, transparency and expenditure control. Provides for the Office of the Auditor General that must investigate, examine and audit the accounts and financial statements of OMAs and state-owned enterprises, audit performance against predetermined objectives, and report to Parliament and Cabinet .

Sources: (Extracted from The Republic of Namibia 1990(a): 26–27; The Republic of Namibia 1990(b):4–; The Republic of Namibia 1991:7–8; The Republic of Namibia 2011:8; The Republic of Namibia 2013:3; The Republic of Namibia 2015:10)

Performance management system guidelines

The performance management system manages performance in the public sector to ensure that the public service is held accountable and delivers efficient and effective services (Office of the Prime Minister 2011:23). The guidelines aim to nurture a performance management culture in the public service. The performance management system derives priority performance areas from Vision 2030 and translates these into the five-year national development plan and annual departmental strategic and operational plans (Office of the Prime Minister 2011:27–28).

The system extends performance management to also manage the individual performance of every staff member in the public service.

National monitoring, evaluation and reporting framework of 2015

The national monitoring, evaluation and reporting framework is intended to guide and coordinate M&E activities across public sector departments and agencies to ensure that the country's goals and outcomes are actively pursued. The unpublished framework defines M&E concepts and terms, describes the importance of M&E plans and the development of indicators, describes critical M&E processes and principles, specifies the reporting requirements and responsibilities of institutions, and describes the organisational structures and capacity building interventions required for effective management and utilisation of M&E (NPC 2015:9–10).

Namibia Vision 2030

Namibia's Vision 2030 is a national framework that spells out long-term development courses for policy strategies, programmes and activities to be undertaken

Figure 1: Vision 2030 translated to plans and performance agreements
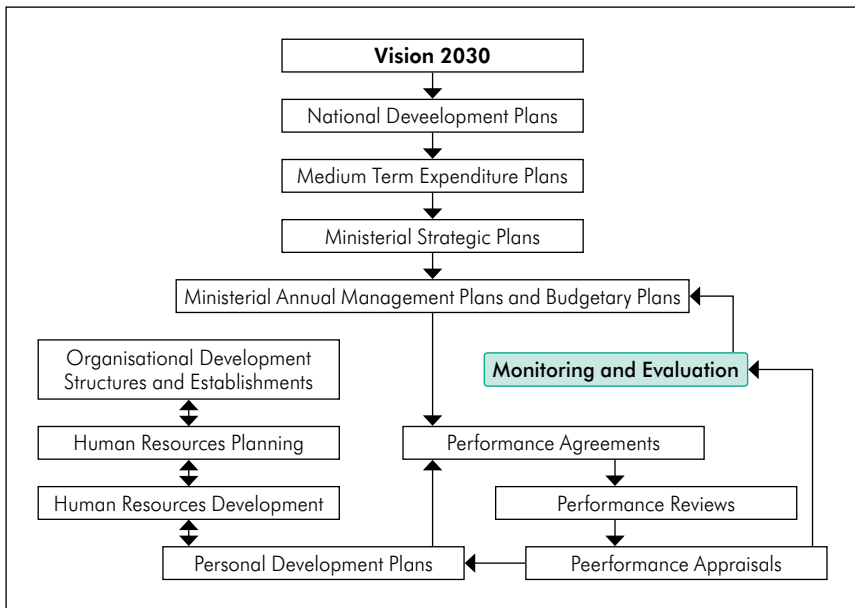
Source: (Republic of Namibia 2011:28)

until 2030. Vision 2030 sets out specific sectoral targets adopted as outcomes for different sectors, forming the basis for all planning in the RBM&E approach (Republic of Namibia 2004:44–75). By 2030, it is expected that the population's social, health, economic and overall well-being will have improved as a long-term result of the programmes that are expected to be implemented (Republic of Namibia 2004:44–75). Vision 2030 presents Namibia's development programmes and the strategies through which the country intends to achieve its goals. It forms the basis for sectoral performance targets against which progress and results are monitored and assessed (see Figure 1).

Fifth National Development Plan of 2017

The NDP5 provides a results-driven approach that places greater emphasis on monitoring and evaluating the results of interventions while considering whether the use of inputs and the completion of activities were achieved (NPC 2017:102). The evaluation plan for the NDP5 will select projects and programmes for evaluation (NPC 2017:103). The principle of sustainable development goals imbedded in the NDP5 puts the achievement of progress within the framework of ensuring the ability of future generations to thrive. The NDP5 is structured under the different pillars and associated goals. Table 2 captures the pillars and goals of NDP5:

Table 2: Pillars and Goals for NDP5

Pillars	Goals
Economic progression	To achieve inclusive sustainability and equitable growth
Social transformation	To build capable and healthy human resources
Environmental sustainability	To ensure sustainable environment and enhance resilience
Good governance	To promote good governance through effective institutions

Source: (NPC 2017:5)

Namibia's Medium-Term Expenditures Framework

The Medium-Term Expenditures Framework (MTEF) determines the execution of the budget and promotes the effectiveness and efficiency of public spending for OMAs. Expenditures are based on budget allocations and the objectives that the programmes are intended to achieve. The MTEF introduces elements of accountability and performance during the planning process and at the end of the rolling budget term based on budget allocations and outcomes (Ministry of Finance 2019:i). The MTEF tracks performance and results through reporting based on set

targets versus budget allocations and a summary of recent performance at output and outcome levels. The approval of new budget requests depends on the performance of the previous year. If the budget allocated was not used as planned, the amount of the following year's rolling budget is reduced due to poor performance.

Harambee Prosperity Plan

The Harambee Prosperity Plan (HPP) highlights "effective governance", specifically accountability, transparency, and improved performance and service delivery. Under the chapter on "execution, monitoring and reporting" it is envisaged that the HPP indicators will drive execution on performance (Republic of Namibia 2017:59–60). The HPP singles out the performance agreements of the civil servants at the ministry and agency levels, from top to bottom, delivered from the ministerial strategic and annual plans. It ensures that the nation is pulling in the same direction towards achieving its development by ensuring accountability, transparency and improved service delivery (Republic of Namibia 2017:19–21). Emphasis is placed on the outcome results of the programme under the different pillars of the plan.

The following section will discuss the strengths and limitations of existing policy frameworks guiding the establishment of the RBM&E system in the Namibian public sector from broader perspectives.

STRENGTHS AND LIMITATIONS OF EXISTING M&E POLICY FRAMEWORKS IN NAMIBIA

The introductory sections of the article discussed the characteristics of a sound M&E system and reflected on lessons to be learned from international comparative cases. While all countries promote both impact and accountability through their M&E systems, some countries, (e.g. Chile, Colombia, Uganda and the United Kingdom) focus more on accountability and compliance while Australia, Canada, Mexico and South Africa focus more predominantly on the outcomes to be achieved by the government. It is deemed essential to embrace a culture of both compliance and outcomes to ensure the use of information for policy and programme management, decision-making, and improvement of service delivery. However, in practice, systems that enforce compliance may impede innovative practices that promote the attainment of outcomes, leading even to malicious compliance where officials focus on compliance at the expense of the intended impacts to be attained. Vice versa, systems that promote innovation and outcomes may lead to contestation around decisions made, thus complicating accountability enforcement.

The strengths and limitations of the Namibian M&E policy framework will be systematically assessed by first unpacking the requirements for an effective M&E system

into observable evidence of capacity or commitment, and subsequently applying a four-point categorical rating system to summarise the average level of established capacity or commitment across the Namibian government. Table 3 presents the interpretation of the assessment scores, adapted from Rahat and Holvoet (2016:41) and refined based on the characteristics and criteria of an effective M&E system.

Table3: Interpretation of the assessment scores

Value	Ordinal Scale	Meaning
0	Weak	None of the requirements of all criteria for an effective M&E system are in place.
1	Partially Satisfactory	Minimum requirements are in place, but no significant efforts are being made to improve.
2	Satisfactory	Up to approximately half of the requirements are in place for the majority of the criteria or it can exhibit extremes of weak and excellent criteria. However, both situations need to be improved to achieve an effective M&E system.
3	Good	Approximately two-thirds of the requirements are in place for most criteria, and some improvements can be made. However, the M&E system is currently well-functioning and sustainable.
4	Excellent	All of the requirements are in place for all requirements, and the M&E system is highly functional and sustainable.

Source: (Adapted from Rahat and Holvoet (2016:41)

The following tables first list the observable criteria with the obtained score, followed by a discussion to explain what informed the assessment.

Institutional capacity and commitment to M&E

Table 4 reflect the creation of appropriate institutional capacity and symbolic commitment to M&E.

Table 4: Capacity and commitment to the M&E function

Criteria requirements	Score
Central coordination of the government-wide M&E system	3
High-placed 'champions' within the sector ministries to drive the M&E system	0
M&E units at decentralised levels and their linkage to the sector M&E unit	1
Average score	1

Source: (Authors' own construction 2023)

Table 4 shows that both the characteristics of capacity and commitment to the M&E and leadership to generate and use information is rated at 1. This implies that while some minimum requirements are in place, there are significant gaps and areas for strengthening.

The NPC is mandated for coordinating the government-wide M&E system. The NPC Act No. 2 (2013:3), clauses (c) and (d), which empowers the NPC to "develop monitoring and evaluation mechanisms," provides an enabling environment for championing the country's M&E system (Republic of Namibia 2013). The NPC is pivotal in coordinating national development planning and implementation, which entails tracking progress and government performance to ensure the achievement of planned outcomes. It also coordinates the efforts in the country to build and sustain the country's M&E system and mobilises financial resources for the functioning of the M&E system at the country level.

The location of the government-wide M&E system is an essential element that influences the system's functionality. The systems of Australia, Chile, the United States of America, and the United Kingdom, are located in the Ministry of Finances (Rabie 2011:3–8; Lazaro 2015:86); while in Colombia, it is under the NPC (Lazaro 2015:3). In Namibia, a comprehensive M&E system is based within the Office of the President (presidency) (NPC 2021:12). However, the institution is highly understaffed, hampering its effective execution of planned M&E mechanisms (NPC 2021:25).

There is no known high-placed 'champions' within the sector ministries to drive the M&E systems. This influential figure must lead the effort to integrate M&E, motivating colleagues and securing resources for a comprehensive government-wide M&E system. Leadership plays a pivotal role in generating and utilising M&E information, as emphasised by Molapo (2019:75), and is indispensable for sustaining RBM&E systems. Political leadership, in particular, is crucial, as noted by Kusek and Rist (2004:21), requiring a strong and consistent champion to establish such systems effectively. The importance of an influential champion was also supported by Mackay (2007:55), Lopez-Acevedo *et al.* (2012:22), United Nations Groups (2012:14), and Boadu and Ersia (2019:537).

Most government ministries and agencies do not have central M&E units, nor do they have dedicated decentralised M&E units that are linked to the central M&E unit. Only 17% of the offices, ministries and agencies have established central M&E units in Namibia, and only five (22%) have clearly defined M&E roles and responsibilities (NPC 2021:9). One of the examples is the Ministry of Health and Social Services, which focuses on addressing the HIV and AIDS pandemic to guide the country's response to HIV/AIDS and measure the effectiveness of the M&E system (CLEAR 2013:30). Very few regional councils have M&E units and where established, the optimal functioning of these units is also questioned. This implies that most sectors do not have the appropriate M&E institutional structure

for coordinating, supporting and overviewing analyses of data and feedback with different stakeholders at the sector and decentralised level.

Dedicated M&E policies and legislation

Table 5 reflects dedicated M&E policies and legislation to promote the performance goals as adopted by the government.

Table 5: M&E policies, strategies and legislation

Criteria requirements	Score
Evaluation policies and guidelines	2
A comprehensive plan indicating what to evaluate, why, how, and for whom	0
Focus on performance results	
M&E results integrated with planning and budgeting	1
Average score	0.75

Source: (Authors' own construction 2023)

The characteristics on M&E policies and guidelines is rated 0.75. This mean that the minimum requirements are in place, but with significant gaps.

The envisaged National Monitoring, Evaluation and Reporting Framework NPC (National Planning Commission, 2015:9–10) that should provide strategic direction for M&E across the whole government has not yet been formally adopted. While a RBM&E framework was introduced, it is not standardised and does not provide an adequate performance feedback mechanism at institutional levels (Mutumba 2021:39). The performance management system guidelines potentially play an important role in translating national goals and objectives to annual and operational performance targets. In fact, conflating organisational and individual performance management may provide a personal incentive to adopt easier goals and targets to ensure good individual performance results, at the expense of pursuing more complex sectoral performance results.

Namibia does not have a national evaluation or specific evaluation guidelines to guide evaluations in the country (NPC 2021:10). A comprehensive plan indicating what to evaluate, why, how, and for whom does not exist. No robust M&E and reporting is in place to guide different reporting levels (Mutumba 2021:39) and most government institutions are not reliant on M&E information for decision-making with limited understanding of the meaning, purpose and methodology for conducting evaluations (NPC 2021:11). Public departments and agencies seldom have a dedicated budget for evaluations, with the few evaluations that are

conducted supported by donor funding that may not be aligned with government priorities (NPC 2021:10).

There is limited evidence of the application of robust logic models when developing outcome statements that inform the goals and objectives of strategic plans across sectors (NPC 2021:30). Public service institutions tend to develop few and easy performance indicators, which are easily achievable, but without any outcome or impact (Kimaro 2018:86). This poses a significant challenge because public policies are primarily aimed at achieving outcomes and impacts rather than outputs. Without clear evidence of whether these outcomes and impacts have been attained or not, it is hard for the government to gauge the effectiveness of its developmental efforts. Moreover, there is a risk of continually investing public resources in ineffective programmes.

M&E is not integrated with planning and budgeting. While monitoring information is used during planning processes, there is limited evidence that it influences budget decisions and prioritisation (NPC 2021:49). The responsibility for M&E is often implemented by planning directorates, providing some grounds for integrating M&E results into planning. However, there are limitations in what is being tracked and this limits the degree to which M&E results are used for internal planning purposes.

Capacity and ability to track performance

Table 6 reflects the available capacity and ability to track performance results across government departments.

Table 6: Capacity and ability to track performance results

Criteria requirements	Score
Capacitated and motivated staff members to operate the M&E system	1
Available professional courses in M&E	0
Dedicated financial resources for M&E activities	0
Average score	**0.3**

Source: (Authors' own construction 2023)

The characteristic of capacitated and motivated staff members to operate the M&E system is rated 0.3, implying that it is weak. There are few dedicated M&E units at the central sector, sub-sector and decentralised levels and donor capacity plays a significant role in M&E. Only four offices, ministries or agencies have established M&E units and most government institutions lack the internal capacity to implement M&E activities (NPC 2021:9). Every institution needs adequate budget

allocation to the M&E unit to foster good performance (Gitonga 2012:141–142; Shayo 2020:11–12). There is a need to budget beyond the current practices, especially for evaluation activities which requires additional funding and capacity. There is a lack of skilled M&E officials to drive the implementation of M&E in the public sector with the planning directorates often taking on this role as well. Apart from the Ministry of Health and Social Services, M&E activities and M&E technical expertise are minimal (CLEAR 2013:30–31). There are no coordinated efforts to strengthen M&E capacity, either nationally or within specific human resources development plans as adopted by departments (NPC 2021:9). In-service training on M&E is ad hoc and mostly inadequate (Nshimyimana 2023:186–187). Only two offices, ministries and agencies have skilled evaluators, limiting the opportunities for peer-to-peer learning and knowledge acquisition (NPC 2021:9). There is minimum effort to ensure that there are skills in the country for staff members to operate an effective M&E system. Most institutions do not have specific budgets for M&E activities, such as recruitment of skilled M&E officials and training opportunities (NPC 2021:9). This severely hampers public sector reform and performance, including regional councils and local authorities.

In Namibia there is no academic institution offering professional courses in M&E, although there are strategies under way to develop a local M&E training programme to train M&E officers in the country (NPC 2021:63). The available capacity of the institute to develop and implement a professional and contextualised course on M&E has not yet been demonstrated. No public institution has implemented a plan to develop M&E capacity in the M&E in Namibia (NPC 2021:26). Addressing these challenges requires a concerted effort from governments, donors, and other stakeholders to prioritise long-term sustainability, strengthen local ownership and capacity, foster political commitment, and ensure coordination and coherence in M&E efforts.

When developing an M&E system, there should be commitment at the senior management level to holistically ensure sufficient budget allocation for M&E functions that will boost the generation of results based on institutional policies and programmes (Kanyamuna 2019:266). Without a well-resourced M&E system, generating accurate and credible information for informed decisions will be almost impossible. Therefore, developing a costed plan to determine the budget allocation is recommended, which will be used to solicit funds for developing, maintaining, and sustaining an RBM&E system at the institutional level.

Reflection on the use of performance information for accountability and improvement

Table 7 reflects the adoption of dedicated M&E policies and legislation to promote the performance goals as adopted by the government.

Table 7: Use of and response to performance information

Criteria requirements	Score
Results of M&E are used for internal purposes	1
Findings shared with policymakers and other groupings of stakeholders in the appropriate format	0
Results of M&E used as an instrument for holding the government accountable	0
Average score	0.3

Source: (Authors' own construction 2023)

The characteristic on the use of and response to performance information is rated weak, which means that it does not meet the minimum requirements.

There is limited internal use of M&E evidence. The NPC assessment's results indicate that 83% of the respondents do not believe that evaluation evidence informs decision-making processes (NPC 2021:10). The current performance management tool that is used to report on achievement does not provide a robust mechanism for monitoring, evaluation and reporting (Mutumba 2021:39). While the demand for performance information from external stakeholders is high, most M&E reports are not readily available, as they are not uploaded to websites for public use by policymakers and stakeholders. Various committees have been established at the parliament level to monitor service provisions within the public sector, but it is not clear what information is used by the committees, and many ministries and agencies also do not rely on M&E information for decision-making (NPC 2021:11).

It is important to cultivate a culture where M&E information is used to track performance and evaluate, control, promote, learn, improve and celebrate results (Kimaro, Fourie and Tshiyoyo 2018:214). Information and performance results should be disseminated to various stakeholders such as beneficiaries, government key ministries, donors, and programme managers for different purposes (Nshimyimana 2023:233), complemented by strategies to strengthen the availability and use of information at all levels of operations.

M&E information should be used to hold government accountable, which is currently not the case. It is crucial to instil good practices related to the incentives and sanctions attached to using M&E results, as suggested by Lopez-Acevedo *et al.* (2012:6) and Kimaro (2018:97). The Ministry of Finance should engage with government and other public institutions to ensure the production, demand, and use of results to support requests for future budget allocation. The budget allocation should be considered in terms of the presented M&E evidence for the programme.

DISCUSSION

Overall, the policy frameworks for M&E in Namibia perform relatively weakly when assessed against the criteria for robust M&E systems. Nevertheless, the discussed policy framework for M&E in Namibia shows that some commitment and progress has been made towards the establishment of a whole-of-government, RBM&E approach. There are policies and legislations in place that instil results-based outcomes. The elements of the framework are embedded in a structured format and sequence that show how they complement one another to achieve the desired results for the country through different arrangements of the established M&E structures and systems within the public sector. From the review of the national guidelines and frameworks, there is evidence of ongoing public sector reforms to increase responsibility and attain development results. The National Monitoring, Evaluation and Reporting Framework was developed in 2015. It proposes a workable system to produce results-based information. However, the relevant authority has not endorsed the framework to date, nor has it been published or implemented. Subsequent studies such as "Enhancing the Performance Management System of the Government of Namibia" (2021) and the "Situation Analysis of the Monitoring and Evaluation Systems in Namibia" (2021) show continued commitment, though this is driven by agencies or donors for the most part.

The comparison with the requirements for successful M&E systems, as derived from comparing the systems of other countries, reveals significant gaps in the current system as implemented in Namibia. More efforts are needed to institutionalise and sustain the RBM&E system. On the positive side, the NPC has taken on the task to strengthen the M&E system, complementing ongoing activities by donor agencies. The 2021 situational analysis of M&E completed by the NPC provides important information that will be helpful to strengthen available policies, systems and structures.

The success of the M&E system will, however, need to transcend policies, systems and structures. Concerns remain about the limited capacity for robust M&E. There is a need to engage with various partners and leverage local educational institutions, such as the University of Namibia and the Namibia Institute of Public Administration and Management to collaborate to offer M&E capacity building courses. Furthermore, awareness of the importance of M&E should be raised to facilitate interest and willingness by government officials to take on M&E responsibilities and be trained in M&E practice. Reviewing and implementing revised performance management agreements can pave the way for introducing M&E structures and tools in the public sector. In addition, the Ministry of Finance should strengthen OMAs' oversight to ensure that the outcomes of policies, programmes and projects are given due consideration in the budgeting process,

and the review and endorsement of budget proposals should be based on the outcomes that are aligned with the strategic goals of the government institutions.

The review offers a set of further recommendations to better align with international best practice:

- Appropriately capacitated and independent structures should be established within all government offices, ministries and agencies and such capacity should be cascaded to regional and district levels as well. Officials in established structures should have clear responsibilities and internal and external reporting lines. An influential champion for an M&E system should be identified and appointed within each organisation to provide leadership, advocacy, and ownership to ensure that M&E remains a priority commitment. Champions play a pivotal role in coordinating stakeholders, fostering collaboration, and building capacity. By advocating for continuous improvement and successes, they enhance the visibility and recognition of the M&E system which promotes support for sustaining and upscaling M&E efforts.
- The M&E system should focus first on generating relevant information that enables the tracking of performance during implementation, linked through a theory of change to the strategic goals and priorities of the government of Namibia. Integrating the M&E system with planning and M&E frameworks is essential to facilitate the harmonisation, coordination and use of performance information (Kimaro 2018:90). Adopting the right indicators, M&E tools and systems will stimulate the availability of performance information, thus supporting an evidence-informed response. Linking performance information to planning and budget allocation potentially provides a strong incentive to strengthen M&E practices and skills. Effective policy/programme/project implementation and outcomes rely on establishing a clear theory of change and logic model that defines all elements and ensures ongoing adaptation to changing contexts. This should be complemented by a comprehensive monitoring framework aligned with indicators, targets and robust data collection methods to obtain a holistic understanding of the programme's progress and results.
- The generation of useful information should be complemented by activities that stimulate the uptake of and response to performance information. It should be ensured that generated reports respond to the information needs of different users and that these reports are made available to different users to inform sectoral planning, political oversight and accountability to citizens. The current policy frameworks do not sufficiently provide for representatives from donors, civil society, the private sector, or parliamentarians in M&E matters.
- The introduction of M&E training programmes with recognised local tertiary institutions, coupled with the allocation of financial resources, is paramount to ensure an efficient and effective M&E system in the country. This investment could create a pool of skilled professionals in the country and may be done with

the collaboration of development partners with expertise in M&E that provide technical assistance, training and knowledge transfer to build local capacity.

CONCLUSION

An M&E system is not a one-size-fits-all, and there is no single route to answering the question relating to the success of an M&E system (Lopez-Acevedo *et al.* 2012:114). This is confirmed in Nshimyimana's (2023:74–83) comparison of the M&E systems adopted by Australia, Canada, Chile, Colombia, Mexico, South Africa, Uganda, the United Kingdom and the United States of America. Every country has its unique institutional arrangements, policies and processes as determined by specific government priorities and contextual considerations (Lahey 2010:3; Mackay 2011:1). Using one country's best practice or policy model as a blueprint to follow is not advisable because it may not work in a different country's political, economic or social contexts. Governments should consider the advantages and disadvantages of other countries' experiences before deciding on the nature and features of the M&E system to be developed.

The arrangements of other countries do provide some pointers on areas to strengthen for greater sustainability of the M&E system. In this regard, it is important to acknowledge that building and institutionalising an M&E system is an ongoing process that requires continuous advocacy to political office bearers, managers, stakeholders and the public to appreciate the role of M&E systems and to respond to generated information. The involvement of influential leaders, senior managers and key stakeholders including private, non-governmental organisations and donors, is critical to contributing to the effectiveness of the country's M&E system.

A well-functioning system depends on attentive and capacitated managers and implementers to design and maintain the M&E system. Information should respond to the government's priority areas, and the needs of different stakeholders. The information should be made available to different stakeholders to inform decision-making, planning, learning and accountability. Ultimately, this shifts the responsibility and demand for performance results from a few champions to a whole-of-government and whole-of-society approach, thus providing the basis for sustainable institutionalisation.

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The Efficiency of the Use of Information Communication Technology in Public-private Partnerships within the Department of Employment and Labour

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ABSTRACT

Public-private partnerships (PPPs) play a significant role of enabling governmental institutions to plan, finance and implement infrastructure programmes in an efficient and effective manner. PPPs that are successfully implemented present opportunities to countries so that they can boost their economies throughout the stimulation of socio-economic development. Although PPP projects have been successful in some countries, their implementation in some other countries is confronted by numerous challenges ranging from cost overruns, corruption, poor management, political influence, lack of institutional support and project delays. This article aims to determine the extent to which the partnership between the Department of Employment and Labour and a private entity has been efficient for the implementation of the information communication technology (ICT) project called Information Communication Technology- Public-Private Partnership (ICT-PPP). Based on the analysis of the available information, the findings reveal that the implementation of the ICT-PPP was partially efficient in the Department due to a number of factors. There was a noticeable poor abidance to the legislations guiding public procurement and above all, the implementation of this project did not result in the transfer of ICT skills from

Siemens/EOH to the Department as expected. The article concludes by suggesting for such a project to succeed, both partners need to comply with the legislative frameworks and governance pillars which are the backbone of effective and efficient implementation of PPPs in South Africa.

INTRODUCTION

Public-Private Partnerships (PPPs) can be described as the agreements that take place between public and private parties to achieve a strategic objective (Nel 2020:17). PPPs are arrangements between public and private partners in pursuit of a shared goal with a degree of shared decision-making and capital investments (United Nations 2016:148). PPPs are aimed at expediting the provision of infrastructure through the sharing of risks and responsibilities between public and private partners. PPPs became more common in the 1980s with the United States and Britain being the pioneers (Heald & Georgiou 2011:217). According to the OECD (2010), PPPs have become a preferred way of executing certain public projects as they have the potential of enhancing value for stakeholders. However, due to budgetary constraints, fiscal and financial challenges in the public sector, public institutions enter partnerships with their private counterparts for the latter to assist with funding and expertise (Budäus 2006:3). As a result, PPPs enable governments to finance, plan and implement infrastructure programmes efficiently and expeditiously. Successful PPPs can boost countries' economies as they have the ability to promote socio-economic development in those countries (Strasser, Stauber, Shrivastava, Riley & O'Quin 2021). The review of literature reveals that PPPs are confronted by numerous challenges that range from cost overruns, corruption, poor management, political influence, lack of institutional support and project delays (World Bank 2020; Batjargal & Zhang 2021:1). Albertus (2016:151) argues that although most PPP initiatives are delivered, they do face challenges such as deadlines not being met, there are cost overruns, lack of skills transfer, lack of retention of expertise, and there is inefficient monitoring of projects. These challenges induce the public sector to incur irregular and fruitless expenses as projected budgets are exceeded due to cost overruns and delayed completion of projects. Therefore, it is essential that we cite another challenge of PPPs which relate to the transfer of risks. PPPs are considered to be one of the ways of avoiding wasteful, fruitless and irregular expenditures since the risks are shared with the private partners or risks are transferred to private entities. In most cases, private entities have better mechanisms in place for risk management and that can be beneficial for the public sector institution that enters into this kind of partnership.

Since the early 1990s PPPs have been considerably embraced globally. South Africa is not an exception. The country adopted the PPP model in its major infrastructure projects in the sectors such as construction, railways, ICT, transportation, and correctional facilities, to name but a few. Bwanali and Rwelamila (2016) note that ICT-PPPs have been largely implemented in the ICT sector on the African continent and they predicted that PPPs may experience high uptake due to the persistence of sluggish economic growth, high inflations and ICT infrastructure deficits on the continent. This article focuses on one of the specific examples of the use of the PPP model in South Africa consisting of the Department of Employment and Labour collaborating with Siemens in the process of modernising the Department's ICT capabilities for its Enterprise Resource Planning (ERP). The main aim of the article is to examine the efficiency of the partnership between the Department and Siemens.

A qualitative approach was used based on an exploratory design. Semi-structured interview guides were used to collect data from participants. A non-probability purposive sampling was considered to sample 16 participants in the Department of Employment and Labour's human resource development, project management office, and the office of the chief information officer directorates and units. According to Vasileiou *et al.* (2018), the sample size of qualitative studies tends to be small to accommodate the in-depth nature of this mode of inquiry. This justifies the sample size chosen for this study. Collected data was analysed thematically based on the following themes: the efficiency of the ICT-PPP, the role of legislations, the transfer of skills, and recommendations for future PPPs. A literature survey was utilised to supplement the primary data.

To attain its objectives, the article is composed of nine sections. Section one provides a background to the study. Section two conceptualises the use of technology in PPPs in the public sector. Section three outlines the theoretical foundation. Section four highlights the models of PPPs. Section five explores the legislation and mechanisms guiding PPPs in South Africa. Section six discusses the use of technology in South African PPPs. Section seven identifies factors that affect the efficiency of PPPs. Section eight discusses risk mitigations. Section nine clarifies the findings of the study before the article concludes.

THE USE OF TECHNOLOGY IN PUBLIC-PRIVATE PARTNERSHIPS IN THE PUBLIC SECTOR

The emergence of the fourth industrial revolution (4IR) has compelled many sectors to rely on the use of ICT to improve the quality of goods and services. This section examines the emergence of PPPs, the various production models, factors impeding the success of PPPs, and the set of legislations that guide the implementation of PPPs in South Africa**.**

Emergence of public-private partnerships

The history of PPPs dates back to 381 BCE (Giti *et al.* 2019:14), but the nature of partnerships has evolved with time due to various needs and changing circumstances. For instance, the challenges such as infrastructure deficits and financial constraints that occurred in the 1970s and 1980s led modern states to seek assistance from the private sector throughout the promotion of the implementation of PPPs. The prevalence of PPPs inspired a governance approach called The New Public Management (NPM), which aimed at enhancing the performance and efficiency of the public sector by introducing private investments for service delivery in the public sector (Casady *et al.* 2019), with the aim of improving public services delivery and making them more efficient. During the period when the NPM was gaining traction, European countries like Spain, Germany and France embraced PPPs as an innovative way of implementing major projects (Kappler & Nemoz 2010:5). Heald and Georgiou (2011:217) state that the United Kingdom (UK) played an integral role in transforming PPPs through the introduction of the Public Finance Initiative (PFI), which aimed to promote PPPs in order to reduce public borrowings and stabilise national debts. The PFI sought to promote the successful implementation of PPPs in the UK, and as a result of the successes attained other countries adopted and used the PPPs model. According to World Bank data (Batırel 2017:1) the greatest amount of PPP investment has been made in the field of communication. Electricity takes second place and highways come third.

In the context of South Africa, after the democratic breakthrough in 1994 the country identified infrastructure as an economic enabler, thus, PPPs were pursued to overcome financial constraints and sceptics of the democratic administration (Deloitte 2010:1). The democratic administration set up a designated unit in the National Treasury to administer and manage PPPs in the late 1990s. Kolver (2014) states that the PPP unit was transferred to the Government Technical Advisory Centre in 2014. South Africa introduced PPPs in the roll out of projects such as Inkosi Albert Luthuli Hospital, the Mangaung and Kutama Sinthumule Correctional Facilities, Free State Social Grants information, Gautrain Rapid Rail Link, Department of Trade, and Industry campus concessions (Baillie & Faber 2022). These partnerships were meant to advance socio-economic development in the country at the dawn of democracy.

Trends and developments

Globally, as already stressed above, PPPs became prominent in the 1970s and 1980s due to macroeconomic challenges facing governments which required them to seek collaboration from private sector counterparts particularly with the

implementation of major projects, specifically those relating to infrastructures development. In recent years, Renner *et al.* (2018:1) contend that governments are still faced with budget deficits, while there is an increased need for creating new cities and government entities. For example, there are novel PPP projects such as the water pipeline in the City of San Antonio in Texas, and City of Long Beach's Civic Center. Further, the authors observe that PPPs are starting to gain traction at a local government level (i.e. city or municipal level) just as they were adopted by national governments in the past. This move will be beneficial for the enhancement of service delivery at a municipal level where critical services such as water, electricity, sanitation, and transportation are needed.

In South Africa, the government has shown an appetite to reduce the sole ownership of state-owned entities (SOEs) such as the South African Airways (SAA) in order to pursue and promote PPPs (Prinsloo & Vecchiato 2021). This has become an unprecedented move as SAA was 100% owned by the government. In addition, the power crisis facing the country has also contributed to discussions about privatising a portion of Eskom to enhance its efficiency and efficacy in the production of electricity. Prinsloo and Vecchiato (2021) are of the view that the Independent Power Producers who generate electricity independently and sell it to the crisis-engulfed power entity can be seen as a novel form of PPPs in the power and energy industry. Therefore, it can be deduced that the trajectory of the use of PPPs in the South African context is changing due to various crises that the country is faced with.

THEORETICAL FOUNDATION

The prevalence of PPPs is motivated by a number of theories and a few of them are discussed below:

Enterprise risk management theory

Traditionally, organisations manage risks by placing responsibilities on unit managers, for example, the Chief Information Technology Officer is responsible for ICT risks. However, Enterprise Risk Management (ERM) was introduced to holistically manage risks that might inhibit an organisation from fulfilling its objectives (Jankensgård 2016:1). Sprčića *et al.* (2015) indicate that ERM takes a broad perspective to risks that negatively affect an organisation's performance and render it incapable of achieving its strategic objectives. Due to the widespread economic changes of the 21st century, organisations are required to embrace new business models like contracts and partnerships to cope with various risks they are exposed to. Therefore, the adoption of ERM was necessitated by recent

business developments. Beasley (2020) argues that traditional risk management approaches were insufficient to address risks faced by organisations, hence, ERM became a preferred option.

ERM provides management teams with an opportunity to use organisational resources and capital efficiently in pursuit of optimal performance while minimising risks (Bromiley *et al.* 2015:265). However, PPPs are risky contracts because they entail huge capital investments which make the management of risk of paramount importance (McKevitt 2015:99). As a result, ERM creates an enabling environment for the management of an organisation to be accountable. Aggregation is an integral part of ERM aimed at enabling managers to understand risk and adopt appropriate strategies to manage risks that represent significant threats to the organisation. Thus, aggregation can be considered to be a mechanism through which information regarding risks is combined and analysed to enable proper management of an organisation's total risk.

ERM theory is relevant to this study as it sheds light on the importance of risk management in organisations, especially when there is a contractual agreement between two or more organisations. Consideration of the ERM theory assisted to gain insights into the understanding of whether adequate risk management existed in the Department of Employment and Labour before it engaged with Siemens in the ICT-PPP project. Albertus's (2016:143) study on: "*Public Private Partnership contract management failure in information technology service delivery*" revealed that there was a lack of risk mitigation in the implementation of the ICT-PPP project by the Department of Employment and Labour in collaboration with Siemens. It is important to note that the basic principles of the ERM stipulate, among other things, that risk assessment must be conducted holistically to appraise the totality of the risks facing respective organisations. To this end, the study suggests that every organisation must always be cognisant of the need to do risk assessment before entering into partnership with a private sector organisation. Unfortunately, the Department of Employment and Labour did not engage in proper risk assessment before entering into the abovementioned ICT-PPP.

MODELS OF PUBLIC-PRIVATE PARTNERSHIPS

There are various types of PPP models that can be considered depending on the needs that organisations want to address or respond to. Both public and private sector organisations are required to select a model that is appropriate to the kind of partnership they want to enter into. The following production models play a significant role in the choice of an approach that can be used to achieve the public sector's projects but relying on partnerships with the private sector entities:

In-house production model

According to Ahamed *et al.* (2013:301), in-house production involves services provided within an organisation by the internal staff members. The in-house model is the most conventional production model as it enables organisations to achieve high productivity levels through the enhancement of internal capabilities. In the context of this study, it is important to note that the internal functions of the Department of Employment and Labour are executed by all its employees in their respective fields of practice. A special mention can be made of the internal Information Technology (IT) staff members who provide day-to-day support services for the ICT infrastructure.

Contracting or outsourcing model

Contracting is a business practice through which an organisation outsources services or capabilities that cannot be performed internally to another company for the duration of the agreement (Ferruzzi *et al.* 2011:45). These services or capabilities include, for example, logistics, IT, cleaning, and maintenance, to name but a few. Contracting is preferred for a number of reasons such as efficiency, optimal production, risk management as well as for management flexibility. For instance, the Department of Employment and Labour contracted the services of Tech-Mahindra to develop a single system that integrates all the systems within the department and its entities to ensure that there is uniformity and a synchronised approach to service delivery (Department of Employment and Labour 2020:42).

Under the contracting or outsourcing model, the private partner is partially involved and the contribution is limited based on what the government or the public sector organisation requires. This can range from provision of tangible goods and services or advisory and consultancy services to the government (Albertus 2016:23). However, in this model the private partner is not responsible for any risks that might occur during the partnership. The rationale for the use of this model is it provides leverage on the skills of the private partner in the pursuit of improved public service delivery. Lease contracts and concession agreements are some of the examples of this model. Contracting or outsourcing is realised based on a set of options, namely: design build (DB), design-build-operate (DBO), design-build-operate-maintain (DBOM) and build-lease-transfer (BLT). These options are discussed below.

Design build
Design build (DB) is an approach in which private partners accept the responsibility to fund, through loan arrangements, and build a project according to the

specifications of the government (Hodge & Greve 2005:65). The agreement stipulates that after the completion of the project, the private partner transfers the project to the government. Consequently, the government assumes the responsibility of managing and operating the project. In most cases, this refers to projects relating to infrastructures such as roads, buildings, airports, railways or transport systems.

Design-build-operate

Design-build-operate (DBO) is the type of PPP in which the government procures the services of a private partner to develop and build the project in line with the specifications of the government (Ruiters & Matji 2016:295). While the government retains the ownership of the facility or infrastructure produced through DBO, the private partner has the responsibility to operate and maintain the facility as per the agreement.

Design-build-operate-maintain

Design-build-operate-maintain (DBOM) is a model that involves a PPP in which the responsibilities to design and build are merged with the processes and maintenance of a capacity or infrastructure over a period. At the end of the agreed period, the facility or infrastructure is transferred to the government. The ICT-PPP between the Department of Employment and Labour and Siemens is a DBOM because the private partner was responsible for building and maintaining the ERP system for the duration of the contract. Furthermore, the private partner transferred the ERP system to the Department of Employment and Labour.

Build-lease-transfer

Under the build-lease-transfer (BLT) model, the private sector finances and builds a facility and then leases it to the relevant public authority, with the state providing the public service. The infrastructure facility is leased for a maximum of 30 years and the public authority pays a lease fee to the private investor and operates the facility during the lease period (Pekdemir 2017). In South Africa, there are numerous partnerships of this kind and one good example is that of the Department of International Relations and Cooperation's (DIRCO) building.

LEGISLATION GUIDING PUBLIC-PRIVATE PARTNERSHIPS IN SOUTH AFRICA

There are numerous laws that guide the implementation of PPPs in South Africa in terms of the legislative framework.

The *Constitution of the Republic of South Africa* of 1996

The *Constitution of the Republic of South Africa* (1996) is the supreme law of the country, it stipulates the principles that guide public procurement in the country. According to its section 217, organs of the state must comply with the five principles of good governance when procuring goods and services. For instance, the procurement process must be reasonable, equitable, transparent, modest, and cost-effective. The Constitution aims to achieve value-for-money and promote fair competition among prospective suppliers. Furthermore, this constitutional imperative concerning public procurement also aims to correct the imbalances of the past by offering previously excluded groups equitable access to opportunities to do business with government via public procurement.

The Constitution also provides for the promulgation of other legislations governing public procurement such as the Public Finance Management Act and Preferential Procurement Policy Framework Act to give expression to the con-stitutional imperative. Furthermore, these legislations are also meant to provide operational guidance to accounting officers of the organs of the state and enables them to execute their duties and responsibilities. This implies that the Constitution provides a significant legislative framework to analyse the ICT-PPP between the Department of Employment and Labour and Siemens.

The Public Finance Management Act of 1999

The Public Finance Management Act (PFMA), 1999 (as amended) is the custodian of public funds and it sets out guidelines relating to the promulgation of regula-tions, specifically the National Treasury Regulation 16 of 2004. The PFMA pre-scribes that public funds must be spent economically, effectively and efficiently. Meaning that there has to be value-for-money in all the projects realised by the public sector and even when this latter is involved in partnerships with other role-players.

In addition, the PFMA provides guidelines on the correct procedures that must be followed by accounting officers as far as transactions are concerned. In accordance with the PFMA, accounting officers are heads of provincial and na-tional departments (South Africa 1999). For state-owned companies (SOC), Chief Executive Officers are considered to be the accounting officers. The Heads of Chapter 9 institutions like the Public Protector and Human Rights Commission are accounting officers as far as the PFMA is concerned. The Act gives accounting officers the duty to prevent fruitless, wasteful, and irregular expenditure. To this end, achieving value-for-money and return on investment on public projects are the objectives of this Act.

The Preferential Procurement Policy Framework Act 5 of 2000

The Preferential Procurement Policy Framework Act 5 of 2000 (PPPFA), was promulgated to give effect to Section 217(3) of the Constitution which stipulates that public procurement in national, provincial, and local government and other organs of the state should be equitable, fair, transparent, modest, and cost effective (South Africa 1996). The PPPFA is also meant to advance and promote the interests of people and/or suppliers who were previously disadvantaged in South Africa (South Africa 2020). South Africa's divisive history has benefitted some groups of people at the expense of others, therefore, legislations like the PPPFA are aimed at redressing such imbalances. The PPPFA was necessitated because the state is the largest procurer of services and goods in South Africa. The South African government's procurement is estimated to be worth R926 billion, which translates to one-fifth of the Gross Domestic Product (GDP) (Brunette & Klaaren 2020). The PPPFA also empowers the Minister of Finance to approve procedures that will enable this Act to achieve its objectives.

Treasury regulations

National Treasury Regulation 16 of 2004 (South Africa 2004) provides a detailed framework for PPPs in South Africa. The regulation provides the basis for the formation of the PPP unit, which was housed in the National Treasury but now resides in the Government Technical Advisory Centre (GTAC). This unit has the responsibility to coordinate and monitor all PPPs in the country. In addition, this regulation empowers an accounting officer to enter a PPP on behalf of their department or institution and to register such projects with the National Treasury. The Treasury Regulation 16 of 2004 is aimed at ascertaining the feasibility, affordability, and value extraction of PPPs before such partnerships are initiated.

THE USE OF TECHNOLOGY IN SOUTH AFRICAN PUBLIC-PRIVATE PARTNERSHIPS

The ICT-PPP within the Department of Employment and Labour was aimed at improving and modernising ICT (ERP) systems of the Department and its entities like the Unemployment Insurance Fund and Compensation Fund in order to enhance operational efficiency by embracing and promoting the use of digital technologies. In addition, this partnership aimed to equip the Department's ICT personnel with relevant skills to assist them to continue operating the ERP.

FACTORS AFFECTING THE EFFICIENCY OF PPPs

There are various challenges impeding the successful implementation of PPPs. This section will provide an overview of challenges such as lack of monitoring performance, corruption, risk management, and skills transfer. PPPs are complex and sophisticated, and they involve rigorous planning, coordination, and implementation, therefore, the lack of governance has had adverse effects.

Lack of clear framework for monitoring performance

Performance management, monitoring and evaluation of PPPs plays an integral role, hence, Hashim *et al.* (2017:3) and Takim *et al.* (2009:105) attribute the inability to successfully implement PPPs to the lack of a performance and monitoring mechanism. This can create delays, and cost overruns which most likely would affect the public partner. PPPs generally fail because of the lack of clear governance frameworks or guidelines on performance assessment and monitoring (Hashim *et al.* 2017:3). Takim *et al.* (2009:105) regret that the lack of clear mechanisms to appraise performance create challenges that negatively affect PPPs and hinder them to deliver on their mandates. The lack of assessment and monitoring frameworks adds challenges to the management of key performance indicators (KPIs) in the implementation of PPPs. Similarly, literature shows that not managing performance tends to pose a risk for the successful implementation of PPPs (Nuhu *et al.* 2019:14; Fombad 2013:18).

Fombad (2013:18) observes that, in South Africa, although Treasury Regulation 16 of 2004 empowers accounting officers to monitor performance, in reality, there is an absence of adequate monitoring and evaluation of performance in the rolling out of PPPs. This is mostly because private partners are not bound by government legislations like Treasury Regulations and this raises governance concerns that need to be addressed if PPPs are to be successful. Members of Parliament's Portfolio Committee regrets the fact that there were discrepancies in terms of monitoring and evaluation of the implementation of the ICT-PPP (PMG 2012). This has had an impact on the progress and successful implementation of the project.

Corruption

The World Bank (2020) has flagged corruption as one of the factors impeding the successful implementation of PPPs globally. Corruption seems to have also infested African countries, particularly South Africa as it is witnessed by the proliferation of businesspeople unduly benefitting from state contracts due to their political connectedness. Fombad (2013:16) says that although South

Africa has progressive legislation governing PPPs, corruption still permeates such systems. Thus, it appears that corruption poses threats to the successful implementation of PPPs in the country. Corruption has been described as the abuse of public authority and resources for private gain. It has been identified as one of the factors inhibiting the successful implementation of PPPs globally (World Bank 2020). In South Africa, Fombad (2013:16) contends that although PPPs are governed by legislations, they are susceptible to corruption which cannot be detected by anti-corruption systems. This is alarming because, in recent years, the South African public service has been marred by acts of malfeasance and this is evidenced by the report of the State Capture Commission. Another example is that of the former Minister of Transport, Mac Maharaj, who was forced to resign in 2003 as a director of First Rand Bank due to allegations that he received gifts and payments amounting to half a million Rand from an individual whose company was part of the N3 toll road consortium. This confirms that corruption adversely affects the efficacy and successful implementation of PPPs. As a result, taxpayers bear the brunt of the corruption that occurs in the roll out of PPP projects.

Contract management

Contract management is an essential aspect of PPPs as they emanate from a contractual relationship between the government and a private company aimed at jointly delivering services or infrastructures. According to Sciulli (2010:368) there are concerns regarding the contracting strategy of PPPs. It is indisputable that contracts provide guidance and assurance, but they do not provide exhaustive recommendations for best practice. PPP contracts are specifically prone to legal contests which might culminate in nullification or setting aside of PPPs. This may have a negative influence on the progress and completion time of the PPP contracts. Nel (2013:313) argues that due to uncertainties in government administration, officials who participate in the negotiations of PPPs are not necessarily the implementers of the same contracts. This creates an administrative headache during the implementation of the project as negotiators might have entered into irregular contracts.

Failure to ensure public value

Public institutions are expected to achieve value-for-money and return on investments for the benefit of the society. Fombad (2013:17) reiterates that PPPs aim at enabling public institutions to create public value and maximise return on investments in collaboration with private companies. For example, the implementation of road, rail and telecommunications PPPs can benefit members

of society as it facilitates mobility and the smooth running of economic activities. It has also been argued that PPPs are the most effective approach to attain public capital projects instead of the traditional public works systems (Raisbeck *et al.* 2009). Therefore, the proliferation of PPPs is inevitable due to their benefits.

Changing economic conditions have amplified the need for public value and return on investments as the government's fiscal budget is constrained. While the national fiscal budget has been depreciating, the need for the development of infrastructure is escalating. Therefore, the importance of PPPs cannot be overemphasised. Literature illustrates that, for many reasons, most PPPs have not been able to attain positive returns nor public value compared to traditional public works systems (Flyvbjerg 2013:761). Estache (2010:5) asserts that PPPs do not offer better returns than traditional public works systems; that is because of their failure to ensure public value and positive returns on investments.

Risk management

Inadequate risk management is another challenge that undermines the successful implementation of PPPs since in some cases one party, mostly the private partner, assumes disproportional risk while their public counterpart assumes less risks. This is affirmed by the UK's treasury document which has indicated that there is disproportional allocation of risk between the public and private partners (Whitfield 2007:3). Thus, the disproportional allocation of risks burdens one party that is ill-equipped, therefore, propelling them to fail to manage aspects of PPPs, which ends up adversely affecting the successful realisation of projects.

In traditional public works systems where public institutions decide to produce goods and services or even their projects in-house, the government would accept all the risks for public projects. This has adverse effects on the fiscal budget. PPPs have been heralded for spreading the risk between the government and private companies. Mouraviev and Kakabadse (2012:264) note that the risk should be allocated to a party that has skills and the resources to manage it. The allocation of the risk associated with PPPs is aimed at reducing costs for both parties and mitigating against the risk of failure. However, literature illustrates that PPPs do not always result in proper risk allocation (McKevitt 2015:99). This is substantiated by a 2007 European Services Survey which found that there were 102 ICT-PPPs whose cost overruns, delays and terminations were borne by governments and passed on to the members of the public (Whitfield 2007:3). In this context, there is a need for equitable distribution of risk to all parties especially in the process of implementing PPPs. This requires private partners to accept the value of risk proportional to the benefits they derive from PPPs.

Lack of governance and accountability

Governance and accountability is an overarching aspect of management that is critical to PPPs. Proper governance is seen as a critical aspect for the success of PPPs. According to the World Bank (2017:3), a regulatory framework is an important governance tool for PPPs as it clarifies details relating to procurement, directing and controlling the roll out of projects. The roles and scope of government and private partners should be clearly stipulated to prevent and above all, settle political issues when they arise. Once there is a regulatory framework for expectations, roles, and responsibilities, the government and private partners can hold each other accountable. As a result, taxpayers whose hard-earned contributions play an integral role in PPPs can also hold any party involved in PPP projects accountable indirectly through their elected representatives.

Nel (2013:332) argues that the institutional framework concerning PPPs is impaired by contentions as private partners prefer as little government regulation as possible. This enables private partners to avoid accountability and act as they see fit. Johnstone and Kouzmin (2010:513) confirm that the lack of accountability also results in the government bearing additional risks to the detriment of taxpayers. Project delays and cost overruns in PPPs do not bear punishment and this is an indictment of governance. It, therefore, appears that the lack of governance and accountability mechanisms in running PPPs is overshadowing the importance of these partnerships as far as development is concerned. There is a dire need for the improvement of the mechanisms that promote governance and accountability. Abiding by the principles of good governance is essential as far as PPPs are concerned. That is because in this kind of partnerships, public institutions and private partners utilise public funds raised through taxes and they have to give account as prescribed by the Constitution and the PFMA.

Skills transfer

Beyond the sharing of risks between partners, maximising returns on investments and ensuring value-for-money, PPPs intend to also facilitate the transfer of skills from a private entity to the public sector organisation. However, the lack of skills transfer is one of the major factors inhibiting PPPs from achieving efficiency and sustainability. The National Business Initiative (2019:8) highlights that PPPs aim to facilitate skills transfer. Based on the models that were presented previously, it is only to be expected that, for example, if DBOM or BLT models were to be used in the rolling out of projects, public sector organisations should benefit from skills transfer so that they are empowered to operate and maintain the projects when they are handed over to them. However, it has emerged that in the case of the ICT-PPP project, the Department of Employment and Labour failed to ensure the

transfer of ICT skills from the private to public partner (Albertus 2016:144; PMG 2011). This caused the Department of Employment and Labour to extend the PPPs since the Department relied on skills from the private partner (PMG 2013). Thus, the lack of skills transfer may disadvantage the Department since it may be required to rely on contracting the private partner to continue implementing and maintaining ICT programmes due to lack of internal capabilities.

One of the objectives of entering into PPP arrangements is the transfer of technical skills from private partners to the government in order to build internal capacity. Therefore, private partners are incentivised to transfer skills with the aim of building government capacity. Vorster (2012) reports that the former Director-General (DG) of the Department of Employment and Labour asserted that the purpose of the ICT-PPP with Siemens/EOH was to design and build the ERP. The former DG further stated that the ICT-PPP was supposed to transfer ERP competencies to departmental personnel to enable them to operate the ERP system upon the completion of the ICT-PPP. However, evidence relating to the ICT-PPP highlights that there was an attrition of departmental staff who were supposed to be equipped with skills by Siemens/EOH (Albertus 2016:144; PMG 2011). Equally, the Parliamentary Monitoring Group (PMG) discovered that there was insufficient termination support offered to the Department of Employment and Labour in the ICT-PPP project because of the persistence of heavy reliance on external service providers (PMG 2013). To this end, the transfer of skills remains one of the major challenges facing PPPs and it has been a major issue in the roll out of the ICT-PPP project within the Department of Employment and Labour.

RISK MITIGATION STRATEGIES

According to Lutkevich (2023:1), risk mitigation is one of the approaches used to prepare for and reduce the effects of threats faced by a business. Some of the risk mitigation strategies are discussed below:

Valuing liabilities

Governments need to assess the form of support provided to a project. Direct liabilities can be easily assessed and budgeted for as to when the relevant accountabilities fall due. For example, the government may undertake to make consistent payments to providers of road, hospital, school, and prison facilities (Budina, Brixi & Irwin 2007). In addition, if the facilities are properly constructed and made available to the grantor, the actual use of the facilities has only limited relevance for the availability payment. Further, Budina *et al.* (2007) insist that the government might also provide guarantees, such as the revenue and exchange

rate guarantees offered for toll road projects which reward facility operators when revenues fall below a given point or when the exchange rate between local exchange and the currency of debt exceeds a given ceiling.

Managing liabilities

According to the International Monetary Fund (IMF) (2005), government needs to protect itself from the applied and financial consequences of calls on its guarantees. This involves first identifying the institution that will manage calls on guarantees with adequate resources to ensure that calls are correctly made and processed. The government also needs to assign in covering the costs of providing guarantees, in particular, the transaction costs related to allocating government support, the cost of reserves set-aside for the guarantee, and any profit or additional funding to be used to increase available support. These are budgets that can be borne by the government or by the project through the charging of guaranteed fees, including upfront custodies and periodic fees. Consequently, charging fees can also help ensure that guarantees are only sought when needed. Assurance fees set too low inspire unselective applications and set too high discourage project execution.

Guarantee fund

A mechanism currently being considered by several governments involves the creation of a fund of molten assets that can be rapidly mobilised if a contingent liability is realised. The fund would have its own balance sheet, be removed from the annual budget cycle, and benefit from independent governance (World Bank 2020). The guarantee fund might be used to: i. ring fence budget distributions envisioned for government support of PPP projects, ii. reduce the likelihood of alteration of such funds for inefficient use, and iii. edge liabilities for government support offered to PPP projects to the value of its capitalisation of the fund.

FINDINGS

The findings are analysed and interpreted based on the following aspects: the efficacy of the ICT-PPP, the role of legislations, the ICT skills transferred from the private to the public partner, and recommendations for future PPPs.

The efficiency of the ICT-PPPs

The study found that the ICT-PPP in the Department of Employment and Labour was partially efficient because some ICT programmes were delivered. In addition,

participants indicated that some of the programmes that were implemented as part of the PPP are the inspection and enforcement of the services system, while Human Resource Development (HRD) systems were not implemented. This finding can be attributed to the lack of monitoring and evaluation as Batjargal and Zhang (2021:1) argue that the lack of monitoring can impede the successful implementation of PPPs. This implies that the ICT-PPP project only achieved a moderate value-for-money as it was partially efficient.

Role of legislation

The majority of participants in this study indicated that they were not aware of legislations governing PPPs in South Africa. This implies that the implementation of legislations governing PPPs was poor in the ICT-PPP project. The lack of abidance to governance principles as well as legislative frameworks can adversely affect the successful implementation of PPPs (Sadeghi *et al.* 2020:163; Delić *et al.* 2021: 57). Therefore, it can be stressed that the lack of knowledge of the existing legislative frameworks that govern PPPs in South Africa may have contributed to the partial efficiency of ICT-PPP.

Skills transfer

The study revealed that there was no transfer of ICT skills from Siemens/EOH to the Department of Employment and Labour, instead employees were transferred from the private partner to the department. Literature affirms the finding by highlighting that departmental staff was not empowered with ICT skills by Siemens/EOH (Albertus 2016:144; PMG 2011). The study further found that the failure of skills transfer compelled the department to appoint personnel from the private partner for business continuity. This implies that ICT-PPP failed to serve its mandate as departmental staff was not equipped with ICT skills.

RECOMMENDATIONS FOR FUTURE PPPS

The study's participants recommended that there is a need to not only have a proper legal framework governing PPPs in South Africa, but roadshows and campaigns should be conducted to raise awareness. According to Delić *et al.* (2021:58), a strong legal framework for PPPs can contribute to successful implementations of such partnerships. Another recommendation pertains to the need to put in place adequate governance mechanisms that would clarify the duties and responsibilities of public and private partners involved in the delivery of PPPs. Important to note is that the Treasury Regulation 16 of 2004 makes provisions

regarding the manner in which respective departments or entities intending to pursue PPPs have to ascertain whether they have internal or would require external expertise to oversee the partnership (South Africa 2004). Thus, reinforcing the implementation of existing governance frameworks may assist in this regard. Finally, it is suggested that public partners should improve the remuneration of their staff members in order to retain scarce skills and/or lure expertise from the private sector to boost the skills base in the public sector.

CONCLUSION

This study sought to ascertain the efficiency of ICT-PPPs in the Department of Employment and Labour. A qualitative method was followed to assess the efficiency of ICT-PPP within the Department and 16 employees from HRD, OCIO and PMO were interviewed. A review of literature was conducted to analyse the emergence of PPPs, production models in South Africa, factors impeding the success of, and legislations governing PPPs in South Africa. The findings of the study revealed that the implementation of the ICT-PPP project was partially efficient, due to a number of factors such as poor implementation of legislations and the absence of ICT skills transfer from Siemens/EOH to the Department of Employment and Labour's staff members involved in the project. The study concludes by recommending that appropriate legal frameworks and governance mechanisms should be established and promoted for the successful implementation of PPPs in South Africa. Lastly, it is recommended that staff remuneration may be improved to retain scarce skills and possibly attract expertise from the private sector to boost the skills base within the Department of Employment and Labour.

NOTE

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Key Socio-Economic and Cultural Determinants Influencing Gender Inequality in Education in Developing Countries with Reference to the Case of Rwanda

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ABSTRACT

This article investigates the socio-economic and cultural factors affecting gender issues in education in developing countries, with specific reference to Rwanda. It highlights the context of gender equality in basic education, in higher education and among academic staff in higher education in Rwanda. The article identifies a number of socio-economic and cultural factors promoting inequality in the education of women in developing countries. The methodology used was a qualitative approach that involved conducting a desktop study to analyse available literature, as well as regulatory and official documents.

INTRODUCTION

Gender equality, women empowerment, quotas and the representation of women in political office have become common narratives in the international arena. In line with this, local governments are increasingly focusing on gender equality as a

basic requirement for democratic, inclusive and effective governance. Within this paradigm, the participation of women can play a key role in rendering services to rural communities.

Gender equality is a basic human right and a key development catalyst. According to the United Nations Development Programme (UNDP) (2015), "Gender equality, centred on human rights is recognised both as an essential development goal on its own and as vital to accelerating sustainable development". There is growing momentum among governments and civil society to ensure women's participation and leadership in the political arena, and specifically within local governance structures (International Centre for Research on Women 2012). This is in line with one of the tenets of the Universal Declaration of Human Rights, which states that, "… everyone has the right to take part in the government of his or her country". Improving the political status and representation of women at all levels of decision-making is seen as fundamental to achieving both transparent and accountable governance and sustainable development in all areas of life (United Nations (UN) Fourth World Conference on Women, Beijing 1995).

Despite these strides, there still seems to be gender disparity in education in Rwanda. Upon reviewing existing literature, a research gap was identified in women's education. Despite the substantial representation of women, there is insufficient information on the limiting and enabling socio-economic and cultural factors causing inequality in women's education. In a similar vein, there is a scarcity of literature on the challenges women leaders face within Rwanda's education system. To this end, these hampering factors will be investigated.

The article adopts a qualitative research approach based on a conceptual and contextual analysis. During the desktop review, official documents, including policies and legislation, as well as literature on local government, gender studies and women's participation were consulted. According to Babbie and Mouton (in Auriacombe 2006:62), conceptualisation entails the process "of specifying the vague and mental imagery of our concepts and sorting out the kinds of observation and measurements that will be appropriate for our research".

Furthermore, the research investigated the context of gender equality in basic education, in higher education and among academic staff in higher education in Rwanda. In line with this, the research investigated the socio-economic and cultural factors affecting gender issues in education in developing countries with a specific focus on Rwanda. The researchers identified the following socio-economic and cultural constraints: Culture and religion; poverty; demographic pressure; early marriage and pregnancies; parents' level of education; labour market opportunities; dropping out of the education system; lack of required academic performance; attitudes and beliefs; armed and family conflicts; low completion

and achievement rates; gender-based violence; parental income; unequal responsibilities and division of labour at home; expectations of the community; gender stereotyping and the role of higher learning institutions.

CONCEPTUAL UNDERPINNING

Gender is a central organising principle of society that cannot be fully understood without being conceptualised and contextualised correctly. The conceptual clarification discourse is dominated by the notion of Inglehart and Pippa (2003 in Vyas-Doorgapersad 2014:102) that, "gender is the socially produced difference between feminine and masculine" and Holmes (2007 in Vyas-Doorgapersad 2014:102), who states that "gender is the socially and culturally learned expectations and behaviour associated with members of each sex".

As a human rights issue, **gender equality** is a precondition for, and indicator of, sustainable people-centred development. It refers to "the equal rights, responsibilities and opportunities of women and men and girls and boys and implies that the interests, needs and priorities of both women and men are taken into consideration, recognising the diversity of different groups of women and men" (Mediterranean Institute for Gender Studies 2005 Internet Source).

According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2003) **gender equity** is the process of being fair to men and women. "To ensure fairness, measures must often be put in place to compensate for the historical and social disadvantages that prevent women and men from operating on a level playing field. Equity is a means…Equality is the result" (UNESCO 2003).

Gender mainstreaming, according to Reeves and Baden (2000 in Vyas-Doorgapersad 2018:13), is an organisational strategy to introduce a gender perspective to all aspects of an institution's policy and activities, through building gender capacity and accountability. Most major development organisations and many governments have now embraced "gender mainstreaming as a strategy for moving towards gender equality" (Reeves and Baden 2000 in Vyas-Doorgapersad 2018:13).

Gender empowerment is one of the most commonly used development terms. Although it has several meanings, it mostly refers to women's economic empowerment or self-reliance. More broadly, empowerment is viewed as a "bottom-up" process of transforming gender relations, through individuals or groups developing awareness of women's subordination and building their capacity to challenge it. Part of the process is ensuring women's voices are heard on a personal level in the family and household and on a societal level (Reeves and Baden 2000 in Vyas-Doorgapersad 2018:13).

GENDER EQUALITY IN THE RWANDAN EDUCATION SYSTEM

After the genocide in 1994 (popularly known as the 'Genocide Against the Tutsi'), Rwanda emphasised human capital (UNDP 2015). Rwanda's policy paradigm shift was articulated in Vision 2020, the country's long-term vision, and the Economic Development and Poverty Reduction Strategy (EDPRS), its medium-term vision (Murasi 2021:36). Within this context, access to higher education was boosted, including for marginalised students (Tusiime, Otara, Kaleeba, Kaviira and Tsinda 2017:3).

Regardless, there should be a focus on specific budget allocations in favour of girls' education, among others, and attaining equal access to education from basic to higher education (Masanja, Masanja and Masanja 2016 in Nyiransabimana 2024). According to Rwirahira (2019), academic research, teaching and community outreach addressing gender equality gaps contributed to the formulation of key policies and programmes. Due to these policies and programmes, Rwanda has become a key role-player in empowerment on the global stage. Rwirahira (2019) notes that, despite Rwanda's successful promotion of gender representation, as reflected in Parliament, further investments are needed to ensure gender equality in its education system, with a particular focus on tertiary education across all the fields of study (Rubagiza 2015:77).

According to the East African Community (EAC) Report (200 in Rubagiza 2015) on Rwanda, there remains many setbacks, ranging from:

- "the mentality that all the burden of household work and chores must be borne by girls and women;
- gender insensitivity of the parents and lack of self-esteem by girls;
- few qualified women teachers in secondary and higher education, especially in the areas of science and technology, which implies lack of suitable role models; and
- a low completion and achievement rates for girls" (EAC Report 2009).

According to Rwirahira (2019), "Academic research, teaching and community outreach with a focus on addressing gender equality gaps have played a vital role in the development of key policies and programmes that have contributed towards Rwanda's status as a champion of women empowerment on the global stage" (Rubagiza 2015:78). Likewise, the Global Gender Gap Report of 2018 (in Rwirahira 2019:3) ranked Rwanda in the sixth position in the world for gender parity.

Gender equality in basic education in Rwanda

The Ministry of Education (MINEDUC) (2015:12) states that, "although Rwanda has achieved gender parity at primary and lower secondary levels", boys are still

out-performing girls from upper secondary level onwards. Dropout and repetition rates remain a challenge for both boys and girls, yet with higher gravity for girls. The main reasons given by MINEDUC (2015:12) include:

- low levels of parent satisfaction in schools;
- household costs;
- illiterate parents who place low value on education, especially for girls;
- academic workload and examination orientation;
- lack of student interest;
- lack of secondary places;
- illness; and
- domestic responsibilities.

According to Huggins and Randell (2008), as in other parts of Africa, women in Rwanda have been excluded from education since the establishment of the modern education system. In Rwanda, colonial and post-colonial regimes did not pay the required attention to female education. The first schools for girls were introduced 40 years after boys' schools were established. At the beginning, girls' education focused on reinforcing their traditional social roles, as well as hygiene, home economics and secretarial skills. Conversely, males were trained to be administrators and technicians. As such, it was difficult for females to access higher levels of education and be exposed to fields related to science, technology, engineering and mathematics (STEM).

The situation in Rwanda worsened in 1994, when the country experienced a genocide. This had a negative impact on the population in general, and 80% of Rwandans dropped under the poverty line (Rubagiza 2015:78). The traditional responsibilities of men and women were also affected, as women became heads of households after losing their husbands. Women became key role-players during the reconstruction, reconciliation, peace-building and development process. Several policies, laws and programmes and approaches were put in place to maximise their participation. This situation, in addition to the strong belief that gender is a human right, encouraged the Rwandan authorities "to demonstrate a strong political will to promote gender equality" (Rubagiza 2015:78). Furthermore, there was a strong focus on devising appropriate mechanisms and strategies to translate the formulated policies into action.

The current positive trends stem from Vision 2020, as noted before. The strategy confirmed the country's commitment to reach "Universal Education for All", one of the most important former Millennium Development Goals (MDGs) (Ministry of Finance and Economic Planning (MINECOFIN) 2000). In 2005, a National Task Force for the Coordination of Girls' Education in Rwanda was established. This specific five-year plan was aligned to the EDPRS, and the Education Sector Strategic Plan (ESSP) was developed. Thereafter, an EDDP 2008–2012 was adopted

(MINEDUC 2007). This has helped in implementing the girls' education policy by alleviating education barriers for girls and has led to an increase in "the number of females in the education system at all levels" (MINEDUC 2015:12). In line with this, girls' education was allocated special budgets to improve enrolment, retention, completion and transition to higher levels of education (MINEDUC 2007).

There are commendable achievements towards gender equality in the education sector in Rwanda. These achievements were the outcome of a commitment towards enforcing existing global principles and agendas that shaped the country's decisions at policy, legal, strategic and programme levels. Furthermore, institutional arrangements to promote gender equality in the education sector helped bridge this gap. Indeed, more schools are being built for better access as well as a focus on gender-sensitive facilities and a conducive environment, such as availing free sanitary pads at school. In addition to the universal agendas around gender, Rwanda has introduced special homegrown initiatives to help bridge existing and new gender gaps. One of the striking examples is the availability of girls' changing rooms at every primary and secondary school.

The efforts made by the Rwandan government to promote gender equality are reflected in education-specific budget allocations for girls in primary, junior secondary and upper secondary education (MINECOFIN 2010:76). These budget allocations helped with girls' retention, as it is used to cater for specific issues that interfere with their education. This helps level the playing field for entering higher education.

Furthermore, the Rwanda Chapter of the Forum for African Women Educationalists (FAWE) "collaborated with the government and opened two pilot schools for girls to enhance both their enrolment and excellence" (Rubagiza 2015:79). In addition, this organisation institutionalised a prize for high-performing girls in national examinations. Like other similar initiatives, the ultimate goal was to narrow the gender gap and inequalities in higher levels of education.

While effective policies to promote equal access to education at all levels were formulated, girl students continue to be under-represented in secondary education (Rubagiza 2015:89). Gender inequality, which is particularly visible in higher education in Rwanda, starts at a secondary education level.

Undeniably, there are clear signs of gender inequality in favour of men in secondary schools (Buhuga Secondary School 2021 in Nyiransabimana 2024). Furthermore, this gender gap persists throughout the education cycle, from enrolment to completion of higher education. Further analyses and corresponding actions still need to be carried out to maintain the momentum towards the ideal of gender equality in the education sector. Existing programmes with an indirect positive impact on gender equality have to be strengthened and new strategies must be devised. For instance, the popularisation of the use of gas for cooking at home not only has a positive impact on climate change or economic gains, but

also ensures that girls do not waste time gathering wood for cooking. Gas stoves also enable boys to become more involved in household chores.

The United States Agency for International Development (USAID) (2014) affirms that girls entering school is on par with boys, but the gap between females and males continues to widen up to a higher education level, and this is eventually reflected in women's representation in leadership positions in education (USAID 2014:3). "Social inequalities are also reproduced through interactions within the schooling environment, where gender bias among teachers can be observed… for example, where girls receive less attention from teachers than boys. Thus, reinforcing male dominance which can hinder girls' access to and completion of education" (Kabeer 2003 in Nyiransabimana 2024).

By ensuring universal education for all in primary and secondary education, "the government is committed to creating the groundwork and causing significant headway in permitting access to higher education for all" (Rubagiza 2015:90).

Gender equality in higher education in Rwanda

Between 1963 and early 1994, access to higher education in Rwanda was characterised by regional and gender disparities in enrolment and graduation, mainly based on ethnicity and patriarchal tendencies. However, after the genocide, Rwanda recognised the importance of human resources in developing its economy and introduced initiatives to enhance access to higher education, especially among marginalised students who were previously excluded (Tusiime *et al.* 2017:3). The UNDP (2015) states that Rwanda's public spending for investments in higher education was significantly higher during its first Poverty Reduction Strategy Paper (PRSP) (known as the PRSP 1), whereas other countries worldwide focused on basic education.

Although this is an encouraging achievement, females remain under-represented in public higher education because males generally perform better than females at the upper secondary level (MINEDUC 2015). Female students find private higher learning institutions more appealing because they offer more flexible learning conditions (Tusiime *et al.* 2017). As a result, females are over-represented in private higher learning institutions and under-represented in public ones. A tracer study by Rwanda's Higher Education Council (2015 in Nyiransabimana 2024) found that, in all higher learning institutions (HLIs), 65.5% of the respondents were male while only 34.5% were female.

This is also corroborated by the study conducted by Tusiime *et al.* (2017:12), which revealed that, "The proportion of female graduates (31.1%) was significantly smaller than that of males (68.9%) in public universities. In contrast, women increasingly represented the majority of graduates in private universities (53.8% for female and 46.2% for males)".

The study, which focused on public and private HEIs in Rwanda, revealed that, among the population of 78 050 students who graduated, 58.3% were males while 41.7% were females. Yet, it is important to note the disparity between male and female graduates at public and private HEIs: the proportion of female and male graduates was respectively 31.1% and 68.9% in public institutions, whereas in private institutions, females represented 53.8% while males represented 46.2% (Tusiime *et al.* 2017:8).

The same study revealed that, among the reasons behind the choice of HEIs, is that public HEIs are subsidised by the national government. In public education, students have limited options to switch specialisations, whereas in private education, students have the flexibility to change their area of focus. In addition, there is a perception that private institutions offer more flexibility to study and work (Tusiime *et al.* 2017:15). Also, public institutions are said to have rigorous assessment criteria, as they require a pass mark of 78.3% to enrol, compared to 59.5% for private institutions (Tusiime *et al.* 2017:15).

The same study noted that the choices made at upper secondary education level are still influenced by the traditional expectations associated with gender-oriented occupations. Indeed, the fields such as agriculture, veterinary medicine and sciences, medicine, engineering, health sciences, applied and pure sciences are exclusively offered in public HEIs (Tusiime *et al.* 2017:19). On the other hand, service-focused disciplines including tourism and hospitality, business and accounting, education, etc. are common in private institutions (Tusiime *et al.* 2017:19). Onsong (2011) argues that this preference in favour of private education institutions, based on a study conducted in Kenya, is because courses offered in private institutions are characterised by subject areas that require lower levels of investment in infrastructural facilities (Onsong 2011:76). According to Bernasconi (2003 in Nyiransabimana 2024) private institutions are principally interested in market-driven courses that do not necessitate huge investments in equipment and research facilities. The imbalances described stem from social, cultural and economic factors.

Socio-economic limitations significantly impact the academic success of female students, ranging from the inability to afford essential educational materials to health-related challenges. Students from low-income households lack access to items like educational supplies, beauty products, and recreational activities. This could lead to immoral, and risky engagements, such as sexual affairs. As a result, they could be exposed to irreversible problems including HIV/AIDS and unwanted pregnancy, which have extended consequences in their future life (e.g. dropping out of university) (Atinaf and Petros 2016 in Nyiransabimana 2024).

One of the reasons behind this underrepresentation in public institutions and overrepresentation in private ones is that males generally perform better

than females at an upper secondary level. Therefore, because admission to public higher education requires good results, male students tend to outnumber their female counterparts in these institutions. As such, private institutions remain the sole option for the majority of girls (MINEDUC 2015). Moreover, private institutions offer flexible options for students to pursue the courses of their choice. These factors seem to inspire many students, especially females, to enrol in private institutions as opposed to their public ones (Tusiime *et al*. 2017).

"Another strategy meant to institute a culture of gender equality was the government's introduction of a Master's Programme in Gender and Development through the Kigali Institute of Education" (Rwirahira 2019). The aim was to empower women in academia and thus train graduates who could be agents of change in the Rwandan society (Prime Minister's Office of Rwanda 2011 in Nyiransabimana 2024). Masanja *et al*. (2016 in Nyiransabimana 2024) show that, despite the strategies and mechanisms initiated by the Government of Rwanda and learning institutions to fill the gender gaps, the number of male students remains higher than that of female students. Access to higher education remains easier for males than females, with an even higher significance in STEM disciplines. Rwirahira (2019) argues that, to remedy this, the Centre for Gender Studies "at the University of Rwanda has played a role in advising both the university and the government on gender-related issues" (Rwirahira 2019:3).

According to MINEDUC (2015), there is a shrinking divergence in subjects studied by boys and girls in Rwanda. Although boys out-numbered girls in sciences five years ago, these numbers have started to increase from 2012. The same trend is observed in humanities, languages and teacher education. However, women still lag behind in subjects related to science, mathematics and technology education (MINEDUC 2015:12). This is again one of the consequences of education stereotyping, as females still gravitate towards traditional women's occupations such as nursing, secretarial jobs and social work, whereas engineering, physics and pure sciences remain dominated by males (MINEDUC 2015:7).

Rwirahira (2019) states that gender inequality in higher education in Rwanda is also observable when the fields of study are considered. Women are under-represented in the STEM subjects.

There is also an under-representation of women as academic staff members. Moreover, women staff members do not influence decision-making, which gives them less bargaining power and limited opportunity to propose initiatives "to promote gender equality and women's human rights" (Rwirahira 2019). The fact that women are under-represented in the academic staff component confirms that the gender-biased traditional roles are still relevant in Rwanda.

Socio-economic and cultural factors affecting gender issues in education in Rwanda

The socio-economic and cultural factors that play a role include culture, religion, poverty, demographic pressure, early marriage and pregnancy, parents' education level, labour market opportunity, dropping out of the education system, lack of required academic performance, attitudes and beliefs, armed and family conflicts, low completion and achievement rates, gender-based violence, parental income, structure of the family, responsibilities at home, expectations of the community, unequal division of household labour, gender stereotyping and the role of higher learning institutions. These determinants of gender inequality in higher education are discussed below.

Culture and religion

Seguino (2010:4) states that the role of religion in perpetuating norms that promote gender inequitable attitudes is complex because religious institutions are not cast in stone. However, religion is considered as a dominant factor in shaping gender attitudes (Seguino 2010:4). Seguino's (2010:4) empirical results indicate that gender inequality is not attributable to the absence of democracy but to culture and religion.

In a study conducted by Cooray and Potrafke (2010 in Nyiransabimana 2024), it was found that culture and religion have a greater influence on gender equality in education than political institutions. Indeed, religion and culture can inhibit women's education. At a later stage of active life, "the status of women in society is an outcome of the interpretation of religious texts and of the cultural and institutional set-up of religious communities" (Klingorová 2015 in Nyiransabimana 2024).

Although the Government of Rwanda has made significant efforts to promote gender equality in the education system and has seen positive advancements, there is a noticeable decline in the percentage of females transitioning from primary to higher education. Norms and beliefs in the Rwandan society are among the factors that justify this context. Slegh and Kimonyo (2010 in Nyiransabimana 2024) state: "Although policy in Rwanda is gender progressive, cultural norms and beliefs may negatively influence girls' academic performance and advancement". Bell and Payne Consulting (2011 in Nyiransabimana 2024) also stress that cultural attitudes dictate that girls should be passive, deferential and less confident and outspoken than boys. These social biases may hinder the performance of females at school, and in some cases, teachers are not trained on how to manage the specificities of females and males in the school environment, for instance, how to stimulate the "active participation of females in a class setting" (Nock and

Dusenge 2012 in Nyiransabimana 2024). This leads to females' low performance which, in turn, affects their enrolment in HEIs and ultimately their professional career (Jones 2014:43).

In many societies, culture is still a hindrance for equality between girls and boys and, according to some cultures, girls should marry early, and girls and women must have lower social status than men (Nock and Dusenge 2012 in Nyiransabimana 2024). The consequences are that "young girls are told that they should prepare for their future roles as mothers and spouses" (Nock and Dusenge 2012 in Nyiransabimana 2024). Some cultures do not consider girls' education "as important, and the majority of girls stay at home to take care of household chores and younger siblings" (Yeba 2015 in Nyiransabimana 2024). In line with this, Jekayinfa (2004) argues that traditional attitudes towards women around the world "help to perpetuate violence against women…stereotypical roles in which women are seen as subordinate to men constrain a woman's ability to exercise choices that would enable her to end the abuse".

According to Kamila Klingorova and Tomáš Havlicek (2015 in Nyiransabimana 2024), the status of women in society is very diverse worldwide. Among many important traits associated with the differentiation of gender inequality is religion, which itself must be regarded as a fluid concept with interpretations and practices "embedded" and thus varying in cultural and historical relations. Admitting the complexity of the issues, some religious norms and traditions can contribute to the formation of gender inequalities and to subordinate the role of women in society (Klingorova and Havlicek 2015 in Nyiransabimana 2024).

The influence of religion on gender equality in education has been stressed by Norton and Tomal (2009 in Nyiransabimana 2024), who used the "data on educational attainment" of Barro and Lee (1993 in Nyiransabimana 2024). In their study, Barrett *et al.* (2001 in Nyiransabimana 2024) proposed to measure religion by the share of the Buddhist, ethno-religion, Hindu, Muslim, Orthodox, Protestant or Roman Catholic people in a given population (Barrett *et al.* (2001 in Nyiransabimana 2024). The study revealed that Hindu and Muslim religions have a negative influence on female educational attainment compared to other religions.

According to USAID (2014:1), some of the most influential cultural factors that hinder girls' achievement and advancement include the gendered norm of female responsibility for household tasks that diverts time and attention from school/teaching, unplanned pregnancy which increases childcare responsibilities, and environments that discourage the participation of girls. Expectations for high academic achievement of girls may be lower than for boys, and some teacher behaviour is not conducive to the active participation of girls. In a counterproductive cycle, the lack of female role-models in high-level and decision-making positions reinforces the tendency of girls not to pursue these positions, and the low number

of women who complete higher levels of education limits qualifications necessary to reach higher positions in employment.

In most communities, culture dictates that women are responsible for household tasks, agricultural duties and providing care to children and the elderly. Nock and Dusenge (2012 in Nyiransabimana 2024) suggest that this gendered division of labour in the home is the main underlying cause for the under-representation of women in education management and career advancement. Women who are busy with domestic and agricultural duties have less time to spend on study or work outside the home and flexibility is constrained compared with men.

Bell and Payne Consulting (2011:24) goes even further and argues that this unequal division of labour between the sexes at home also impacts students. Domestic responsibilities may reduce the time girls have to study after school compared with boys and could interfere with getting to school on time and contribute to absenteeism. Parents in rural areas may withhold their daughters from attending school to care for their younger siblings during harvesting periods, and this lapse in attendance disadvantages their exam performance.

According to Sarker, Karim, Zehadul and Suffiun (2017 in Nyiransabimana 2024), parents who hold traditional gender role attitudes are more inclined to have lower educational aspirations for their children, particularly for girls rather than boys. They add that "parents living in rural areas link their individual household life with conservative and traditional gender attitudes" (Sarker *et al.* 2017 in Nyiransabimana 2024). Consequently, "rural parents expect a similar role in the future conjugal life of their children… parents socialise their daughters to be ideal caregivers in their home similar to their wives, rather than providing higher education to daughters" (Sarker *et al.* 2017 in Nyiransabimana 2024).

Poverty

Poverty is not only the lack of money, but also "the lack of access to basic social services such as healthcare and education, decent housing and also being marginalised and excluded" (World Vision 2020). Thus, poverty entails "lacking enough resources to satisfy basic needs of life (food, clean water, shelter and clothing). However, in today's world, poverty can be extended to include a lack of access to health care, education and even transportation" (World Vision 2020).

There is a close "relationship between gender inequality and poverty" (World Vision 2020). In fact, gender inequality is not the only symptom of poverty, but also of illiteracy, conflict, war and famine. Thus, gender inequality is prevalent in a number of societies and more widespread than most other factors (USAID 2021).

Banda (2003) argues that socio-economic factors such as family poverty, the direct costs of schools, including tuition fees, are some of the factors that prevent girls and women from access to education. In line with this, Allison and Randell

(2007 in Rubagiza 2015:112) argue that high school fees prevent children from poor families from accessing secondary school and higher education. Rubagiza (2015:112) states that many poor families can only afford to educate a few of their children, and in many cases, sons are often chosen over daughters.

According to Branisa, Klasen and Ziegler (2010 in Nyiransabimana 2024), poverty has a detrimental impact on the education of girls, as well as on their families and the entire nation. Notably, "the opportunity cost" of education including income from child labour tends to be higher for girls since they are more often expected to do housework, take care of younger siblings, and/or work in agriculture" (Branisa *et al.* 2010 in Nyiransabimana 2024).

Studies have established that the income of a family has a positive impact on children's education, and that decisions about investing in children's education are influenced by the resources available for each child and the family (Glewwe and Jacoby 1994 in Nyiransabimana 2024). The decision to pursue studies at a higher level depends on the household's financing capacity. This is especially true for higher education, as the costs are high, except in public institutions where students receive subsidies and loans from the government. As a result, poverty is among the factors that limit school enrolment and contributes to high dropout rates. Poor families have difficulties enrolling and maintaining their children in schools, especially after the free basic education (Subrahmanyam 2015).

Linking poverty to "sex differences", UNICEF (2015: 60) indicates that these differences "in educational attainment stem from two main issues relating to gender…First, when money is tight, many families display a preference for educating boys…This choice may be based on a cost-benefit calculation: for example, in patrilineal societies, where sons inherit from their fathers, girls are often regarded as 'temporary' family members who will eventually join their husband's family and are therefore unlikely to offer high returns on their family's investment in their education". Second, conservative households and communities still wonder about the necessity of a girl's education while her future role will be limited to being a wife and mother. In some cases, they even see a girl's education as detrimental when they suspect that a higher education level might affect her marriage opportunities or price (Hunt 2008 in Nyiransabimana 2024).

However, the imbalance between males and females in terms of educational attainment levels is almost insignificant within wealthier households (Hunt 2008 in Nyiransabimana 2024). "Females from this segment of the population are even more educated than their male counterparts from the poorest households" (Hunt 2008 in Nyiransabimana 2024). In Rwanda, for example, as confirmed by the statistics presented by Orrnert (2018:10): "Higher education attendance fell across categories, but were lowest for the rural population (1%) than urban (7%). Similar male/female rates were recorded (both 2%); East (0%), North (1%), South (1%), West (2%) and Kigali City (7%)". The Rwandan Demographic and Health Survey (RDHS) (2014 in

Nyiransabimana 2024) adds that this also corresponds to wealth quintiles (0% of the poorest; 6% of the wealthiest). The RDHS (2014) states that "tertiary completion rates confirmed a rural-urban gap (rural 3%; urban 17%)…These were higher in Kigali City (16%) than the regions (the North recorded the lowest rate at 3%); 0% of the poorest completed two years of tertiary education, compared with 20% of the wealthiest…the rate was slightly lower for women (5%) than men (7%)".

Demographic pressure

Population growth rates are generally higher in poor areas than in richer ones. It can therefore be assumed that poverty influences rapid population growth. This is a vicious circle, widening the gap between the poor and the rich. According to UNICEF (2015:23), "Females are the most affected in such a situation and asserts that denied basic human rights, women in many high-poverty areas rely on childbearing for survival, status and security…already suffering from extreme poverty, unwanted pregnancies and the responsibility of raising multiple children, opportunities for women are further restricted" (UNICEF 2015:23). Areas with the cycle of high fertility rates – females bearing children at younger ages and having more children because of high adolescent fertility rates and high child mortality rates in their area – fail to achieve higher per capita income (UNICEF 2015:23).

When it comes to education, the large family sizes in poor areas with high fertility rates affect education which, in turn, affect economic growth and development (UNICEF 2015:23). Girls may end up leaving school very early to help with domestic tasks or because of pregnancy once they reach puberty (UNICEF 2015:24). An estimated two-thirds of the 350 million children without access to education are girls (UNICEF 2015:24). Closing the gender inequality gap requires that girls have access to education and basic health, including family-planning services. The communities should also stop devaluing females and relegating them second-class status; a social role confined to the household (Helium Writing Contest 2011 in Nyiransabimana 2024).

Early marriage and pregnancies

The United Nations Population Fund (UNPF) (2006:67) states that, "Early marriage, also known as child marriage, is any marriage carried out below the age of 18 years before the girl is physically, physiologically and psychologically ready to shoulder the responsibilities of marriage and childbearing". UNICEF (2005:30) considers early marriage as an important obstacle to the education of females in addition to premature pregnancy and domestic tasks. These obstacles deny females adequate education and opportunities in society, and thus condemns them to poverty, illiteracy and subjection.

In low-income households, girls often leave school due to their parents' inability to meet educational needs. Parents encourage their daughters to marry early as a way to generate income for the family, particularly in rural areas. Young girls may take refuge in marriage to escape the poverty of their families through dowry, which is likely to bring wealth and income to their family. Another reason that pushes girls to abandon their studies is to acquire basic needs which they cannot get from their parents, such as shoes, clothes, telephones, etc. In a society where femininity is often associated with marriage and having children, girls may struggle to see the value of pursuing further education after completing basic schooling, as they prioritise the perceived benefits of marriage over the worth of education (Kasente 2003 in Nyiransabimana 2024).

Regarding pregnancy as a factor that can lead to females' failure to graduate even when still at school, female students not only need knowledge about sexual relations, bodily functions and reproduction, but must also be informed about contraceptive options and be able to access them free of charge or at least at an affordable cost (Strauss 2012 in Rubagiza 2015).

According to Bayisenge (2008 in Nyiransabimana 2024), early marriage is due to various factors including, among others, the search for economic survival, protection of young girls, peer group and family pressure, controlling female behaviour and sexuality, wars and civil conflicts and socio-cultural and religious values. It is a violation of a girl's human rights as it deprives her of freedom, opportunity for personal development and other rights. It is also a developmental challenge for population pressure, healthcare costs and lost opportunities of human development (Bayisenge 2008 in Nyiransabimana 2024).

Promoting the education of girls is one the most effective strategies for delaying child marriage and avoiding all consequences related to early marriage that have negative effects on their children, families and communities. Increasing women's education levels produces a number of positive outcomes such as lowering early pregnancies and maternal as well as infant mortality (International Centre for Research on Women (ICRW) 2018).

Ankerbo and Hoyda (2003 in Nyiransabimana 2024) confirm that one reason why some girls do not even enter secondary school or higher education is because they start primary school later than boys. Within this context, they are regarded as "mature" before finishing primary or secondary school which brings about the risk of getting married and getting pregnant.

Kapur (2018:16) argues that. "Child marriage imposes negative effects upon the individuals, particularly girls…when girls are married at a young age, they are normally deprived of obtaining education and employment opportunities, and participation in other childhood activities". They are required to stay at home, engage in household responsibilities and to take care of the needs and requirements of other family members. Kapur's study in Pakistan has indicated that girls

usually show unwillingness to do these tasks, but they are required to obey their parents (Kapur 2018:16). Due to traditional viewpoints and perspectives in many third-world countries, girls in rural communities are expected to be married at an early age (Kapur 2018:16). This study revealed that parents dismiss the education of their daughters because they are expected to be married, raise children, and perform household chores (Kapur 2018:16). Parents do not invest or pay much attention to girls' education (Kapur 2018:16). To this end, "marriage becomes a barrier keeping women from achieving a higher social status in society and diminishes their confidence in education" (Choudhary 2014 in Nyiransabimana 2024).

For example, among married Egyptian women aged 25 to 29, those with no education were married at 18 years of age, on average, and had their first child by 20; those with a secondary or higher education were married at an average age of 23 and had their first child by 25 (El-Zanaty and Way 2000 in Nyiransabimana 2024). According to the Turkey Demographic and Health Survey (1998 in Nyiransabimana 2024), in Turkey, 22% of girls aged between 15 and 19 who had no education or who had not completed primary school were already mothers or pregnant, compared with only 2% of girls who had completed secondary or higher education (Turkey Demographic and Health Survey 1998 in Nyiransabimana 2024).

While countries with the highest prevalence of child marriage are concentrated in Western and sub-Saharan Africa (e.g. in Niger 76% of girls marry before the age of 18), due to population size, the largest number of child brides reside in South Asia (King and Winthrop 2015 in Nyiransabimana 2024). King and Winthrop (2015 in Nyiransabimana 2024) argue that one in three girls in low- and middle-income countries continue to be married before the age of 18 and one in nine girls are married before their 15th birthday.

In many third-world countries, when a woman is married and has children, she is expected to stay at home and raise her children (Chaudhary 2014 in Nyiransabimana 2024). This will keep her from progressing in her education after marriage (Chaudhary 2014 in Nyiransabimana 2024). Early marriage goes hand-in-hand with early pregnancy, malnourishment, domestic violence, and pregnancy complications (Leah 2019 in Nyiransabimana 2024). Leah (2019 in Nyiransabimana 2024) adds that, for families experiencing financial hardship, child marriage reduces their economic burden, but later on, the girls find it almost impossible to gain financial independence without education.

Parents' education level

Duman (2009 in Nyiransabimana 2024) adds parental education to the determining factors which influence girls' level of education and is of the view that "more educated parents are more open-minded, more willing to send their kids to

school and perceive education more worthy". Women's studies serve as a catalyst for enhancing the participation of girls and women at all levels of the education system (Duman 2009 in Nyiransabimana 2024). Furthermore, earnings are mostly influenced by level of education, and in Rwanda, the benefits of education are significant. Thus, "income and wealth will be correlated with the parents' education level. Also, mothers with more education have more bargaining power and generate a better allocation of resources towards children's human capital" (Duman 2009 in Nyiransabimana 2024).

Parents' level of education influences their offspring's career orientation. Yet, in rural African communities including Rwanda, some parents have not acquired formal education (Tukahabwa 2018). When parents have a limited formal education, their understanding of gender leans towards conservatism and patriarchal beliefs, whereby it is expected that women remain relegated to household unpaid work (Tamale 2004 in Nyiransabimana 2024). Education in the family prepares boys for so-called hard responsibilities like cattle breeding, clearing farming fields and house construction, whereas girls are socially prepared to become good mothers and housewives. In line with this, Huggins and Randell (2008:52) state that boys are generally educated to become actors in administration and developmental activities, while girls are educated simply to modernise their traditional roles in the society, specifically hygiene, home economics and secretarial aptitudes.

The level of parental education also has a positive or negative effect on children's education. In a study on rural attitudes towards female education, Mensah (1992) made a correlation between the level of parents' education and their attitudes towards girls' education. He found that parents with little or no education do not appreciate schooling and are not eager to send their children to school (Mensah 1992).

The World Bank (2005 in Nyiransabimana 2024) reported that in a country where schooling rates are as low as in Ethiopia, it is a plausible barrier to the schooling of their children. While parents who have attained a significant level of education understand the importance of schooling from personal experiences, their illiterate counterparts do not consider education as important because they fail to understand what education brings as a reward for all investments it has consumed (Ishimwe 2010 in Nyiransabimana 2024).

Labour market opportunities

Wison *et al.* (1993 in Nyiransabimana 2024) state that, as the division of labour in households is based on gender, "females and males are moulded by their parents since a young age according to what the community expects from them and what the parents aspire for them". Thus, the educational and occupational perspective is biased and limited right from the onset for girls who will eventually find

themselves with limited labour opportunities in the future. Mahmud and Amin (2006 in Nyiransabimana 2024) assert that, "In some developing societies when the return for investing in education for boys is seen in terms of increased labour market opportunities, these increases are almost negligible for girls" (Mahmud and Amin 2006 in Nyiransabimana 2024).

Dropping out of the education system

In a study conducted in Texas, Romo and Falbo (1996 in Rubagiza 2015) found that students drop out of school due to the lack of interest in school, personal problems, serious family problems, poor grades and other issues. According to them, becoming a teen-mother is not necessarily linked to dropping out of high school. Their study showed that many girls who dropped out of school were neither pregnant nor mothers at the time they left school (Romo and Falbo 1996 in Rubagiza 2015).

In another study conducted in Pakistan by Human Rights Watch, the researchers found that "many children, including girls, drop out of school because they are working" (Human Rights Watch 2018 in Nyiransabimana 2024). "Sometimes they are engaged in paid work, which for girls often consists of home-based industries, such as sewing, embroidery, beading, or assembling items" (Human Rights Watch 2018 in Nyiransabimana 2024). Other girls are kept home to do housework in the family home or are employed as domestic workers (Human Rights Watch 2018 in Nyiransabimana 2024).

Engaging in household chores is a significant reason why girls may leave school and can be a barrier to their pursuit of higher education. Often one girl in the family, especially the eldest one, has to "sacrifice her education to do housework, while others study" (Human Rights Watch 2018 in Nyiransabimana 2024). When older daughters marry, the responsibility for housework often shifts from them to a younger sister, in turn, pushing her out of school (Human Rights Watch 2018 in Nyiransabimana 2024).

Ankerbo and Hoyda (2003 in Nyiransabimana 2024) argue that, "One of the main obstacles to schoolgirls and women in third-world countries is the fact that domestic work takes up too much of their time". This is also noted by Binauli (2002), who states that girls are from time to time required to assist their mothers with household chores. Consequently, their academic performance suffers, leading some students to drop out of school because they do not meet the necessary requirements to advance to the next level of education (Ankerbo and Hoyda 2003).

According to Rubagiza (2015:122), domestic work creates low self-esteem in girls and a lack of interest in education. Worldwide, girls spend 40% more time performing unpaid chores (including cooking, cleaning, and collecting water

and firewood) than boys (Rubagiza 2015:122). Rubagiza (2015:122) reports that in Burkina Faso, Yemen, and Somalia, girls between 10 and 14 years old bear the most disproportionate burden of household chores compared to boys and in Somalia, girls spend the most amount of time on chores in the world, averaging 26 hours every week.

A high school dropout rate is a factor that hinders girls and women to continue in the education system. It is also the consequence of multiple factors such as poverty, low performance, repetition, pregnancy and so forth, as stated by Wodon (2018 in Nyiransabimana 2024). High dropout rates are caused by issues related to the cost of schooling, early marriages and pregnancies, a lack of learning while in school, and a lack of interest to remain in school (Wodon 2018 in Nyiransabimana 2024). Wodon (2018 in Nyiransabimana 2024) adds that in some countries, some factors play a more significant role, while in other countries, other factors may be more predominant.

However, in many countries, sociocultural factors, poverty and gender roles affect the ability of girls to remain in school (Wodon 2018 in Nyiransabimana 2024). Within this context, Banda (2003) states that girls drop out of school due to pregnancy and early marriages, parental attitudes and aspirations for children, household chores, puberty-related issues, death in the family, and caring for sick parents or relatives.

Similarly, Perlman *et al.* (2018 in Nyiransabimana 2024) found in their research that the high rate of girls dropping out of high school is a significant barrier preventing them from pursuing further education. Their findings revealed that the cost of schooling, early marriages and pregnancies, a lack of learning while in school, and a lack of interest in remaining in school are among the major causes for this state of affairs (Perlman *et al.* 2018 in Nyiransabimana 2024).

Lack of required academic performance

Female students' academic performance may be affected by a variety of factors such as family-, school- and student-related factors. Under family-related factors, variables include family size, parents' educational level, monthly income, domestic workloads and attitude of parents towards educating their daughter (Abitew 2018 in Nyiransabimana 2024). Allison *et al.* (2007 in Nyiransabimana 2024) indicate that, at a secondary school and university level, "entrance to public institutions that provide higher-quality and lower-cost education are determined on the basis of performance in primary school and final secondary examinations". Statistically, girls in third-world countries do not perform well in examinations at all levels due to high rates of absenteeism, and, in some way, using examination scores as the criteria for entrance to public schools institutionalises discrimination against women (Allison *et al.* 2007 in Nyiransabimana 2024).

To substantiate the above, a study conducted in Ethiopia revealed that females' performance levels are lower than male students. A number of factors, such as "parents' education level, school facilities, income level of parents, domestic workloads, school environment, attitude of the society towards female education, were found to be the major factors determining the academic performance of female students" (Abitew 2018 in Nyiransabimana 2024).

Attitudes and beliefs

UNESCO (2018:124) reports that some families do not believe that girls should study or should continue school beyond a certain age. UNESCO (2018:124) reports that in a comparison of responses from 15 countries to the statement, a university education is more important for men than for women. Pakistan stood out as the country with the largest rise in the percentage of people who agreed with the statement between 2001 and 2012.

Oppong (1987) found that some parents undervalue girls' education as they believe that girls will eventually get married and become dependent on their husbands. "Parents see education as an investment, thus educating a girl for a man to marry is not worthwhile…for girls however, it is assumed once they marry, the return on investment goes to their husband" (Oppong 1987). Hyde (1993 in Rubagiza 2015) states that, "Given the costs associated with schooling and the lower monetary return on girls' education, the choice of whom to enrol in school is often made in favour of boys". Notably, "the attitude of parents towards educating their daughter(s) is another family-related factor that affects female students' academic performance in Ethiopia" (Abitew 2018 in Nyiransabimana 2024).

Armed and family conflict

When a country is unable to provide public services during armed conflict scenarios, especially for education, this may have a negative effect on girls and women's education (Urdal and Rudolfsen 2016:6). The same effect could be encountered at the family level. "During times of war and conflict, and when resources are limited, there is discrimination in favour of boys" (Urdal and Rudolfsen 2016:6). Thus, when poverty increases due to war, conflicts and insecurity, parents decide to take "their daughters out of school to avoid direct costs" (Urdal and Rudolfsen 2016:6).

Leah (2019 in Nyiransabimana 2024) confirms that girls and women in regions affected by conflict and crisis face a number of obstacles to attend school. An estimated 39 million girls and adolescent girls in countries affected by armed conflict do not have access to the education system. In South Sudan, 72% of

primary school-aged girls do not attend school, in contrast to 64% of primary school-aged boys. Similarly, in Afghanistan, 70% of the 3.5 million out-of-school children are girls (Leah 2019 in Nyiransabimana 2024).

Low completion and achievement rates

A number of factors hinder girls and women from completing their studies, such as family-related factors like family size which affects more female than male students, family income, domestic work responsibilities, as well as parents' attitude towards girls' education (Abitew 2018 in Nyiransabimana 2024).

Likewise, Binauli (2002:19) indicates that girls are from time to time asked to assist their mothers as guardians of household chores. Hence, their academic performance is impacted, leading to lower achievement compared to boys (Binauli 2002:9). This, in turn, creates obstacles for them in pursuing higher education.

Gender-based violence

Gender-based violence is one of the factors that can prevent girls and women from furthering their studies (King and Winthrop 2015:11). "Gender-based violence includes extreme acts such as kidnapping, bombing, maiming, and killing, which often occur in contexts of armed conflict, militancy, and political violence". In "15 countries around the world (e.g. Afghanistan, Pakistan and Chibok girls in Nigeria), these acts are directly targeted at girls" (King and Winthrop 2015:11).

Like in many other countries, gender-based violence is still a sad reality in Rwanda. A 2008 National Police Report revealed that cases of rape of children and adults, beaten and injured women and murders remain prevalent in Rwanda (National Police 2008 in Rubagiza 2015). Gender-based violence is a complex phenomenon and an issue primarily affecting women and children. The Government of Rwanda identifies gender-based violence as "physical violence, sexual violence, economic violence and psychological violence" (Ministry of Gender and Family Promotion (MIGEPROF) 2009). The Gender Monitoring Office (GMO) (2010:5) states that, "In Rwanda, spousal beatings, sexual abuse and rape are prevalent and commonly cited forms of gender-based violence in times of peace, but economic violence is also included, such as inheritance disputes and acute economic dependence of women on their husbands" (GMO 2010:5).

Leah (2019 in Nyiransabimana 2024) agrees, stating that gender-based violence "affects girls' enrolment, lowers their participation and achievements, and increases absenteeism and dropout rates…it can take different forms including physical and sexual abuse, harassment, bullying, coercion, discrimination, and other types of abuse…it is estimated that 246 million girls and boys are harassed

and abused on their way to school every year, but girls are disproportionately targeted". Research in Tanzania found that, "Almost one in four girls who experienced sexual violence reported the incident while traveling to or from school, and nearly 17% reported at least one incident occurred at school or on school property" (Leah 2019 in Nyiransabimana 2024). "Parents are less likely to let their daughters travel to school if they have to travel long, unsafe distances" (Leah 2019 in Nyiransabimana 2024).

Parental income

Family income has also affected women's access to science-related subjects at the University of Rwanda. In Rwanda, this income can be predicted based on the family's economic category, as per *Ubudehe*, a home-grown development programme whereby people's poverty levels and alleviation measures are defined (Tukahabwa 2018:107).

Structure of the family

The choice of subjects to study at university is influenced not only by the level of education or occupation of the members of the family, but also by the background of the family as an entity and its structure. For instance, a polygamous family will influence their offspring differently than a monogamous family or a single-parent household, because their needs and environment differ (Tukahabwa 2018:113).

Unequal responsibilities and division of labour at home

According to Tukahabwa (2018:117), in Rwanda, girls' workload is significantly heavier than that of boys. Later on in life, this influences their choices regarding the subjects they wish to study at university. In reality, boys are taught by society that they should aspire to become leaders and heads of their future families, as well as take on responsibilities in their communities (Tamale 2004 in Nyiransabimana 2024). From the onset, boys are aware that subjects related to science, mathematics, and technology will lead to certain responsibilities, while girls' choices are influenced early on by predetermined societal roles, including the subjects they plan to study at university (Beoku-Betts 1998 in Rubagiza 2015).

An unequal division of household labour also affects women's career prospects, even after they have gained the necessary qualifications. Most educated women still continue to play their traditional domestic roles; and when a woman interrupts her career due to family responsibilities, regaining employment becomes difficult. Therefore, it is evident that change is essential vis-à-vis the responsibilities assigned to females in the household in order to eliminate women's

dependence on men, even when they hold academic degrees and technical qualifications (EAC Report 2009 in Nyiransabimana 2024). Where women's roles in society are defined purely in reproductive terms, education is perceived as the means to equip girls to be better wives and mothers or increase their chances of getting a suitable husband (Kabeer 2003 in Nyiransabimana 2024). Although these are legitimate aspirations given the realities of society, they do little to equip girls and women to question the world around them and the subordinate status assigned to them (Kabeer 2003 in Nyiransabimana 2024).

Expectations of the community

As marriage is a crucial aspect in Rwandan society, every person longs for the special respect and recognition given to married people. This is irrespective of the related consequences, including the subordination of women to the authority of their husbands. Uwineza and Pearson (2009:10) substantiate this by stating that, in the days preceding a wedding, for instance, "aunts and other elderly women counsel a bride on the duties of marriage. This advice generally focuses on the woman's responsibility to respect her husband and his family and emphasises her obligation to be subservient to her husband. Married women are no longer permitted to act as girls, climbing trees or milking cows".

Unfortunately, this would be applied even to a girl who had her first menstrual period and could therefore be married regardless of her age, even at 14 years old (Tamale 2005 in Nyiransabimana 2024). In the past, biological parents, especially mothers, as well as the extended family, had the responsibility to ensure that their daughters were married at the right age and to teach them how to be good wives in their households. As such, girls were, and are still in some instances, discouraged to pursue their studies in general, including at a higher education level, especially subjects like STEM (Shabaya and Konada-Agyemang 2010 in Rubagiza 2015).

The handful of female learners who choose to further their studies select subjects like art, social science and home economics. Undeniably, these fields of study are in line with the roles they are assigned by the social fabric. Also, the subjects do not require spending too much time at school, unlike males who have more time at their disposal to complete their studies (Tukahabwa 2018:120). According to Tukahabwa (2018), by training the young man to become an engineer, architect, medical doctor, technician, surveyor, statistician, among other professions, the university offers grounds to re-affirm the social norms that men will most likely be prepared for roles that are outside the home, to become public figures. Likewise, when the young woman is trained to become a caterer, nurse or teacher, the university acts as a space for categorising subjects including English, history or home sciences as feminine (Tukahabwa 2018:133).

Gender stereotyping

Kabeer (2003:42) argues that, in terms of gender stereotyping, power relations embodied in the delivery of education must also be considered, particularly in the case of the formal educational system. Gender stereotyping in the curriculum, particularly in textbooks, serves to reinforce traditional gender roles within society and acts as a barrier to the kind of futures that girls are able to imagine for themselves (Kabeer 2003:42). The design of traditional education has often reinforced the biases of many parents that the purpose of schooling is to prepare girls for their domestic roles and being good wives to their husbands (Kabeer 2003:42). This leaves them with few options in terms of earning a living except in poorly paid, actualised forms of work on the margins of the labour market (Kabeer 2003:42). This curtails the potential of education and opportunities to improve their well-being (USAID 2014:23).

Role of higher learning institutions

Tukahabwa (2018:133) also affirms that the choice of subjects is negatively engendered through admission policies, scholarships and the teaching environment and practices. In HEIs, the academic staff corps is also dominated by men, especially in the case of senior lecturers. To reach these senior academic ranks, lecturers have to be PhD holders and most of them have to go abroad for such studies. This requirement thus discriminates against women who have domestic responsibilities such as looking after their families and who cannot afford to be absent for long periods (Masanja 2007 in Nyiransabimana 2024).

A study conducted by Mumporeze and Prieler (2017 in Nyiransabimana 2024) sought to determine reasons behind the unequal access to qualifications in information and communication technology (ICT) in Rwanda between females and males, whereby males have so far been dominating the sector. This situation can again be attributed to the mindset that technology and science is preserved for men whereas women's traditional roles should be confined to the household. As a result, females' potential in the field of information technology has been undervalued (even by the women themselves), which has ultimately led to their under-representation in ICT qualifications. Mumporeze and Prieler (2017 in Nyiransabimana 2024) assert that this situation decreases the role of women in decision-making processes.

Conversely, Tukahabwa (2018:52) affirms that, today, domestic responsibilities are pushing young women to study STEM and other science subjects in higher education. Mumporeze and Prieler (2017 in Nyiransabimana 2024) also recognise that, nowadays, an ever-increasing number of young women enrol for science-related subjects such as physics, chemistry, mathematics and biology. Unfortunately, some of them end up dropping out in higher numbers than their

male counterparts (Bradley 2000 in Rubagiza 2015). Some scholars have attributed this to the fact that HEIs fail to create a conducive environment that would boost gender equity in developing science careers.

To explain this situation, Acker and Oatley (1993 in Rubagiza 2015) point out that, "Women have made relatively few advances to study science subjects [at university and] there is a need to question the assumptions and structure of higher education, particularly as it devalues aspects of woman's existence in the pursuit of economic advance". Feminist scholars have also highlighted the sexist humour and language used in an HEI environment and the low number of female role models and mentors (Steele *et al.* 2013:5 in Nyiransabimana 2024).

CONCLUSION

This qualitative study examined key socio-economic factors promoting inequality in education in Rwanda. It highlighted the context of gender equality in basic education in Rwanda, in higher education in Rwanda and among academic staff in higher education. The article investigated the socio-economic and cultural factors affecting gender issues in education in developing countries with reference to the case of Rwanda. This article identified the following aspects: Culture and religion; poverty; demographic pressure; early marriage and pregnancies; parents' education level; labour market opportunities; dropping out of the education system; lack of required academic performance; attitudes and beliefs; armed and family conflicts; low completion and achievement rates; gender-based violence; parental income; unequal responsibilities and division of labour at home; expectations of the community; gender stereotyping and the role of higher learning institutions.

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Underlining Basis for the National Environmental Policy Design in Ethiopia

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ABSTRACT

This article focuses on Ethiopia's National Environmental Policy design process. The research methodology entails a mixed research design to yield reliable and valid evidence, allowing for a comprehensive evaluation and analysis of the National Environmental Policy design process. The empirical investigation demonstrates that the National Environmental Policy in Ethiopia has been triggered by the inability of the policy to respond to the emergent environmental changes, and international environmental convention, and to harmonise with the restructured environmental sector. Although significant new environmental issues have been acknowledged higher on the policy agenda, the National Environmental Policy design process is dominated by the ideological, incremental, and elitist policy design approach rather than rational policy analysis. The policy option generation and selection process has not been conducted through generating the possible policy alternatives and weighing up their relative consequences, and decisions seem made under bound rationality using the rule of thumb guided by the ruling party policy and the overpromising intentions of international environmental conventions which affect the quality of the policy and the implementation thereof.

INTRODUCTION

Policy design is a process by which public problems that require different policy responses at different levels are identified and resolved through the creation of new policy, or the amendment of existing policy (Howlett and Mukherjee 2017). It involves identifying and structuring the problem, clearly defining policy goals, identifying different policy options, evaluating each policy option using specified criteria, and choosing the most appropriate policy choice for achieving the desired goals (De Ridder, Turnpenny, Nilsson and Von Raggamby 2007; Hisschemöller and Cuppen 2015). This rationalistic view, however, has been criticised as oversimplistic as the reality of policy development is non-linear, and policy decisions are influenced by different factors. Policymakers, like most people, have naturally limited mental capabilities and they make decisions under conditions of bounded rationality, focusing on the most relevant and 'good enough' factor that satisfies or seeks a satisfactory course of action instead of considering all the facts and optimising alternatives to make the best policy decisions (Kørnøv and Thissen 2012:193). Owing to such limitations, practice depicted that bounds rational policymakers is much more likely to introduce incremental policy changes based on learning from experience (Cairney 2016). Since policy design is a complex and interactive technical and political process where ideas and interests interact with the intent to find an acceptable solution (Hankivsky and Cormier 2019) decision-makers may act in terms of their self-interest motivated by their idealistic and/or professional concerns and interests; where politicians seek re-election and office bureaucrats may strive to advance their careers (Eryılmaz 2015; Gill 2017).

The article explores and describes the National Environmental Policy design in Ethiopia, the problem identification and agenda setting process, policy goal and objective setting, policy option generation, and what aspects have an impact on the policy design and decision-making process. This article will add to the current public policy discourse by (i) presenting the rational policy decision-making and the bounded way in which decisions are made, (ii) highlighting how environmental policy decisions are shaped by public officials or other individual participants' self-interests to comply with their political ideology or party policy, and their motivation to comply with the international environmental conventions; and to what extent the decision falls under the influence of the environmental experts' scientific knowledge. The findings have a practical significance. Primarily, it enables the Ethiopian government to comprehend the salient features and recurrent problems related to policy design process drawing upon a body of theories and empirical evidence. The majority of the studies on policy design were conducted using a qualitative research design. Unlike most previous studies, the current study employed a mixed research design to yield more evidence and to explore,

describe, and interpret the data gathered from the interviews, focus group discussion, questionnaire, and document review.

POLICY DESIGN PROCESS: PROBLEM IDENTIFICATION TO POLICY DECISION

Policy design is a critical phase of the policy process through which public problems affecting citizens are identified and alternatives or potential solutions are devised to resolve the problems (Howlett and Mukherjee 2017). It is thus a complex and interactive technical and political process where ideas and interests interact within an institutional setting to find an acceptable solution that can address societal problems (Hankivsky and Cormier 2019:79; Thomas and Ken 2015:834). While the policy design process differs from country to country, most scholars portrayed that it involves the conceptualisation, identification, and structuring of the problem, agenda setting, goal and objective setting, identification, and appraisal of potential policy options and decision-making or policy adoption (De Ridder *et al.* 2007; Hisschemöller and Cuppen 2015).

Problem identification is the first stage in the policy design process and refers to the identification of societal problems or public issues that require the intervention of the government and are worth solving (Cairney 2016:33). This requires understanding the environment in which the problem is occurring, the key dimensions of a problem, and analysing the problem from different perspectives (Turnpenny, Jordan, Benson and Rayner 2015:8). Though there are a lot of problems that demand government action, only a small portion receives the attention of the government and this is dependent on how various interest groups successfully draw attention to an issue (Cairney 2016). Public policy is a spiral in that, after a policy has been adopted, and implemented, and its effects have been assessed, issues that have not been definitively resolved will receive the attention of the government and will possibly appear back on the agenda (Vining and Weimer 2015). These problems should be structured and framed to obtain a deeper understanding of the problem and diagnose root causes. Problem structuring is a precondition for designing solutions for the corresponding problem and needs a systematic procedure for structuring surveying, and digging deep into a particular issue, as well as solving ill-defined, ill-structured, or complex problems (Capano and Michael in Tiruneh 2023)). For instance, environmental problems related to climate change, droughts, and wildfires are complex problems, which have different causes. The interlinked nature of the environment with agriculture, industry, and urbanisation may be fraught with difficult decisions and trade-offs due to competing interests. These problems need an understanding of the interlinked nature of the environment with other sectors to develop an in-depth

understanding of environmental problems, and to reconcile competing demands and find strong portfolios that can satisfy environmental and other sectors.

Following problem identification and structuring policy goals, objectives will be crafted to show the destinations that are achieved when the issue at stake is addressed (Turnpenny *et al.* 2015). Policy goals are broad statements of purpose, the range of desired outcomes, or what is to be achieved by implementing the policy. Conversely, objectives are more specific statements of purpose and policy actions that provide a bridge between general policies and actual implementation guidelines. Policy objectives and goals can be achieved when the most realistic or best policy alternatives are chosen (Cairney 2016; Dye 2017). Policymakers should thus generate policy alternatives and weigh up the benefits and drawbacks of each policy alternative to choose policies that offer the greatest benefit. The process of policy option generation and selection is often conducted using different tools such as Cost Benefit Analysis and Multiple Criteria Analysis (Henrichson 2014). Cost-benefit analysis is a valuable, comprehensive, and powerful tool for choosing the best alternative policy options in monetary terms and the valuation of how people whose welfare is affected by policy actions value those losses and gains; while multi-criteria analysis is often used to measure and assess each policy alternative and select the best policy option by considering different criteria (Ward, Dimitriou and Dean 2016).

POLICY DESIGN MODELS:
RATIONAL VERSUS INCREMENTAL MODEL

The rational approach to policymaking follows a linear process and it typically involves the stages of identifying a range of alternatives, predicting the consequences of each alternative, and selecting the alternative that maximises the attainment of goals (Cairney 2016; Dye 2017). One of the major requirements of the rational model is that it requires adequate knowledge, facts, and information to analyse the relative weight of the alternatives and all of the potential benefits and costs of each policy alternative. Policymakers may, however, be constrained by their mental capabilities and may make decisions under conditions of bounded rationality that satisfy or seek a satisfactory course of action rather than considering all facts and alternatives to make the best policy decisions (Anyebe 2018; Cairney 2016; Simon 1976). Because of these constraints, evidence shows that bounded rational policymakers are far more likely to implement minor policy adjustments based on learning from experience by addressing the unintended consequences of earlier policy decisions (Cairney 2016). The incremental policy approach assumes that policy change appears through the accumulation of small changes and serial remedial measures (De Coning and Cloete 2006; Hayes 2017).

The model thus accepts a slight adaptation, taking into account the existing policy as legitimate, effective, and satisfactory. This implies the occurrence of the possibility to integrate the incremental approach with the rational approach. On the other hand, the rational behaviour of individuals may not necessarily produce positive collective outcomes. Due to the self-interested nature of the individuals, seeking the aggregated whole and the common good amid diverse policy preferences might be idealistic (Eryılmaz 2015; Gill 2017). The rational choice theory thus assumes public policy is a function of self-interested individuals, groups, or organisations who want to maximise their benefits within the policy decision-making process. Public officials, political elites, bureaucrats, and technical experts may act in terms of their professed motivations considering their idealistic and professional concerns and interests, where politicians seek re-election to office and bureaucrats strive to advance their careers (Bothe 2019); to minimise any uncertainty associated with policy effectiveness and satisfy their ideological self-interest (Anyebe 2018; Hula, Bowers, Whitley and Isaac 2017); and budget maximisation (Keech and Munger 2015). For instance, people who consider themselves as being to the right (or conservative) prefer a smaller government, and a free-market economy and tend to deprioritise environmental issues and display weaker environmental support; whereas the leftist is considered as pro-environmental (McCright and Dunlap 2013; Niklas, Sverker and Simon 2017). Most public officials try to comply with international conventions and integrate the intentions of the agreements into their national policies, strategies, and programmes (Sand and McGee 2022; Tunnicliffe, Metaxas, Le, Ramirez-Llodra and Levin 2020). The environmental policy discourses in most cases have also been dominated and influenced by environmental experts and interest groups (Patricia 2022). Although scholars suggested that complex scientific and technological issues should also embed perspectives of citizens (Machin and Smith 2014; OECD 2017); people from different ideologies and personal interests, look at problems, understand, interpret, and suggest policy alternatives from different perspectives motivated by their self-interest.

RESEARCH DESIGN

The unit of analysis for this article is the National Environmental Policy process. The second unit of observation, the product of human behaviour, in this article refers to the legal and policy documents, official documents including operational plans, opinion survey documents, the National Environmental Policy and websites. The article employed both qualitative and quantitative methodologies. The qualitative approach enabled the researchers to gain an insider perspective, to understand and describe the policy design process; whereas with the quantitative

approach the survey was also vital to gather a large number of opinions and measure the perspectives and experiences of employees of environmental sector and civic organisations from naturally occurring data. The data emanated from interviews, and focus group discussions were thus complemented, triangulated, and integrated with the survey data to ensure the validity of the study.

The research population of this study refers to the policy design team, public officials, employees, and civic groups in the environmental sector as a venue of environmental policy design. The study made use of both probability and non-probability sampling methods to draw a sample of questionnaire respondents and interview participants respectively. Questionnaire respondents were selected using proportional simple random sampling. A total of 351 questionnaires were distributed to individuals working in the environmental sector and civil societies engaged in environment-related issues. Of the interview participants 22 were drawn from among environmental sector public officials (8), Civil Society Organisation Executives (10), the Environmental Standing Committee at the House of People's Representatives (2), and from the National Policy Study Institute (2) using purposive sampling. One focus group discussion was carried out with six participants drawn from the environmental policy design team. The result obtained through interviews was also verified and supported by document review.

DATA ANALYSIS AND FINDINGS

Problem identification and agenda setting

The interviewees and focus group participants reported that the need for National Environmental Policy revision was initiated by a development partner called Africa Climate Change Resilience Alliance (ACCRA). They added that environmental Civil Society Organisations (CSOs) have also been drawing attention and repeatedly calling on the government at various times to revise the aging and outdated environmental policy. However, soon after, the Ministry accepted the need for the policy revision considering the following driving forces:

- Because the existing environmental policy is more than two decades old, reformulating the policy is inescapable due to the emerging environmental problems.
- Owing to the high dependence of the population and economy on climate-sensitive sectors like agriculture, a robust environmental policy is worthwhile in Ethiopia, to coordinate and manage the dynamic environmental changes and their impact on the economy.
- Due to the transboundary nature of the environment, the new international environmental agreements and legally binding instruments related to climate

change, global pollution, and depletion of natural resources also demand the revision of the National Environmental Policy.

■ The interviewees emphasised that the environmental protection sector has passed through different institutional restructuring and changes in its legal formation. Institutional structure change was one of the driving forces for the revision of the National Environmental Policy in order to make the policy compatible with the duties and responsibilities of its implementing agency.

The interviewees revealed that steering and technical committees were established to undertake the policy design process. The steering committee, headed by the then State Minister of Environment and Forest Ministry was comprised of all the directors in the Ministry and was responsible for providing overal direction to the technical team. The steering committee was also in charge of monitoring the policy design process, reviewing and providing feedback on the draft policy submitted by the technical committee. The technical team that was assigned to design the National Environmental Policy was drawn from different departments of the environmental sector, non-governmental organisations (NGOs), ACCRA, the Ethiopian Development Research Institute (EDRI), United States Agency for International Development (USAID), and academics (Addis Ababa University).

According to the focus group participants, upon receiving instruction from the steering committee the technical team (policy design team) conducted a public opinion survey, the constitutional and international legal framework analysis, and mandate analysis to find out the actual gaps and weaknesses of the previous policies and frame the environmental problems that ought to be addressed by the new policy. The environmental rights and duties entrenched in the 1995 Ethiopian Constitution, Article 44 (citizen's right to live in a clean and healthy environment), and Article 92 (the obligation of the government to protect the environment) are considered as the main agenda of the government to be reflected in the policy. They also indicated that a comprehensive policy gap analysis was conducted to determine whether the existing policy complies with the policy content of the international environmental agreements Ethiopia has signed and to identify issues that should be embedded in the National Environmental Policy. The globally released sound technical environmental assessment information was taken into account in the problem definition.

As learned from the focus group discussion, the public opinion survey conducted during problem identification was financed by the development partner. The researchers questioned whether the donor organisation had influenced the priority setting during the problem identification process and agenda setting. The participants revealed that the problem identification process was carried out by the technical (policy design) team, and except for the funding, the donor organisation was not influencing the problem identification process.

One interviewee from CSOs stated, however, that there will be donors' influence indirectly by availing additional environmental information to policymakers regarding issues that were placed high on global environmental agendas and informing them on which environmental issues adequate financial support can be obtained for the implementation thereof.

Interviewees among the public officials also voiced a positive sentiment about donor influence and acknowledged the importance of donors' support in promoting environmental protection activities. They highlighted, since the environment globally matters and has a direct international impact, it will be obligatory to pay attention to the priorities of donor and other international organisations that work on environmental protection.

Most of the interviewees and focus group participants, however, remarked that since the policy was revised after two decades, reformulating the policy was inevitable to sufficiently address the major new environmental problems. The document review of the revised policy illustrated that, among others: climate change, the need for green technology, disposal of solid and liquid waste and hazardous substances, wildlife management, the impact of transport, energy production, and large-scale agricultural investment on the environment, the need to incorporate an Environmental Impact Assessment (EIA), the need to harmonise other sectors' policies that take into account the national developments, and the need to build a partnership of the environmental sector with CSOs, the private sector, and an effective international cooperation system; these are the major issues identified to be addressed by the new environmental policy.

The focus group participants added that the national environmental problems structuring process is carried out by the policy design team. The problem identification gap analysis report, the implementation history of the previous policy, the global environmental problems, the mandate of the environmental sector, and the trend analysis are taken into account to frame environmental issues affecting Ethiopia. Following the analysis of the policy design team, the steering committee members drawn from the environmental sector public officials provided their input and finally approved it. Based on the belief of the participants, it is therefore only the government officials' opinion (elite), environmental experts' opinion (expert), and their institutional experience that play a significant role in influencing the environmental agenda and the problem structuring process.

Policy goal and objective setting

The focus group participants stated that policy goals and objectives are designed to take into account the major environmental problems and fulfilling the constitutional right of citizens to live in a healthy and safe environment. They added that environmental policy goals and objectives in general are based on two fundamental

principles: reducing human interference with the environment and the impact of environmental pollution on humans and other organisms, as well as managing these impacts to protect the well-being of society and other life on earth.

The participants and the interviewees emphasised that the goals and expectations of the international environmental conventions, and multilateral environmental agreements are taken into account during goal and objective setting. Due to the transboundary nature of the environment and the interconnectedness of the climate, there are issues that both developing and emerging economies need to focus on and fulfil to limit the harmful impact and keep the environment safe and clean. As elaborated by respondents, the environmental goals and targets stated in the Sustainable Development Goals (SDGs), for instance, are used as a foundation to design the National Environmental Policy goals as Ethiopia must achieve SDGs as a signatory party. As learned from the House of Peoples' Representative legislative process guideline (2017) national policies are required to comply with international conventions signed by the country; in particular, the policy should consider if there are obligatory statements imposed on the country by the treaty.

The review of the newly revised National Environmental Policy document indicates, the policy sets only one policy goal and nine objectives. The National Environmental Policy goal stated, "To ensure sustainable development by promoting to satisfy the present generation desire for development in harmony with the future generations' ability to meet its own needs". The objectives include: "to establish and strengthen environmental administrative structures that ensures environmental sustainability; to promote culture compliance and implementation of environmental laws; to prepare policies, laws and standards in participatory and inclusive processes towards ensuring sustainable environmental protection; to promote sustainable environmental and natural resource management by allocation enough financial and technological supports; to enable environmental education, raise awareness, and build capacity to effectively implement natural resource management and utilization system; to put in place timely and accessible information system on environment; to enhance green employment opportunities; to put in place a response system and build capacity to neutralize the adverse impacts of climate change on national economy" (The newly revised environmental policy 2020).

Policy option generation and selection

Interviewees from public officials strongly believe that the technical team, established by technocrats and practitioners, has used rational information and followed a logical step to identify and analyse different alternatives and make the substantive decision to address the environmental problems. Likewise, an interviewee from the CSOs assumes that most of the problems identified and addressed in the

National Environmental Policy are new issues and thus require policy designers to identify and compare different alternatives and choose implementable and effective solutions to address environmental problems.

As learned from the discussion points of the policy design team, new policy options are selected taking into account different criteria such as sustainability, availability of adequate technical and financial support, urgency and sustainability of the solution, coherence, and compliance with international environmental conventions, cost-effectiveness, practicality and administrative ease to implement within the capacity of the country.

Furthermore, questionnaire respondents were asked their perspective on a range of environmental policy alternatives and their relative consequences are identified during the environmental policy option generation and selection process.

Table 1: A range of environmental policy alternatives identified and their relative consequences weighted

Statement		N (%)	Types of Working Organisation	
			Government	CSOs
A range of environmental policy alternatives and their relative consequences are identified and weighted to select new policy options that could bring about the desired outcome	Disagree	20(6.6%)	10 (5.6%)	10 (7.9%)
	Undecided	59(19.4%)	20 (11.3%)	39 (30.7%)
	Agree	178(58.6%)	114 (64.4%)	64 (50.4%)
	Strongly Agree	47(15.5%)	33 (18.6%)	14 (11%)
	Total	304 (100%)	177 (100%)	127 (100%)
	Mean	3.83	3.96	3.65
	Median	4.00	4.00	4.00
	SD	0.765	0.726	0.782

Source: (Authors' interpretation)

The mean score of the groups ranges from 3.65–3.96 and the median of 4.00 across all groups shows that 74.1% of respondents agree (58.6% agreed, and 15.5% strongly agreed) that the environmental policy alternatives and their relative consequences are identified and weighted to select new policy options that could bring about the desired outcome. There seems to be a degree of variation in terms of responses between those working in government offices and CSOs where CSOs tend to be undecided with the highest proportionality level, 30.7%.

Yet, the SD at 0.782 suggests the responses of CSOs are also clustered around the mean and perceive that a range of environmental policy alternatives and their relative consequences are identified and weighted to select new environmental policy options. The researchers were skeptical of this result and tried to investigate using a follow-up question to the policy design team. The policy design team members revealed that comparative analysis has not been done among different alternatives and their resultant consequences have not been weighted and rated to compare and choose the best policy alternatives, and no explanatory document has been found that shows the process.

Respondents were asked to reflect on the extent the National Environmental Policy is adopted relying on the existing policy as illustrated in Table 2.

Table 2: The National Environmental policy is adopted relying on the existing policy with only incremental change

Statement		N (%)	Types of Working Organisation	
			Government	CSOs
The National Environmental Policy is adopted relying on the existing policy with incremental change or improvement.	Disagree	19 (6.2%)	12 (6.8%)	7 (5.5%)
	Undecided	41 (13.5%)	36 (20.3%)	5 (3.9%)
	Agree	190 (62.5%)	100 (56.5%)	90 (70.9%)
	Strongly Agree	54 (17.8%)	29 (16.4%)	25 (19.7%)
	Total	304 (100%)	177 (100%)	127 (100%)
	Mean	3.91	3.82	4.05
	Median	4.00	4.00	4.00
	SD	0.757	0.798	0.677

Source: (Authors' interpretation)

The average mean score of 3.91 and the median of 4.00 indicates the consistent agreement of respondents across the group at 80.3% (agree 62.5% and strongly agree 17.8 %). Respondents view that the National Environmental Policy is adopted relying on the existing policy with incremental change or improvement. The SD, 0.757 implies the least variation among respondents within the group.

According to most interviewees and participants, the environmental policy was adopted relying on the existing policy with some incremental change to address environmental policy objectives of the previous policy, and those were not achieved due to the low implementation capacity of the country. They added that

the global environmental assessment information and the specific environmental policy options which allocated tasks to be performed by Ethiopia pertinent to controlling pollution and climate change, conservation of habitats, and biodiversity have been taken into account.

Environmental policy decision-making

Policy decisions are often influenced by public officials and individual participant self-interests to obey their political ideology; comply with international environmental conventions; and/or motivated by scientific knowledge.

Unanimously, interviewees believe that public policies including environmental policies are the reflection of the government and public officials' political ideology. The respondents from elected representatives said:

> "Developmental democracy is a political ideology that the Ethiopian government and its public officials who lead different sectors are promoting. The government considers environmental management and sustainable development to the level of fundamental human rights. The Constitution guarantees all citizens the right to live in a clean and healthy environment. The constitution further requires the government to protect the environment from any human-made damage. These constitutional requirements certainly show that Environmental rights are given due attention as an extension of basic human rights and as a tool for sustainable economic development in Ethiopia. These constitutional provisions, environmental rights, and duties are reflected in the national environmental policy".

Likewise, one interviewee from the public officials says:

> "Public officials' political willingness for greater environmental protection is demonstrated in Ethiopia in integrating the issue of climate within its development planning to build a green economy and passing the country to middle-income status by 2030. In addition, Ethiopia has played a great role in political leadership in the green economy and climate change at the international level. The former late Ethiopian Prime Minister has led international climate discussions at the Conference of African Heads of State on Climate Change for two terms held in Copenhagen and Durban. Ethiopia effectively lobbies the world for greater international ambition to tackle climate change and support for mitigating its impacts".

Adding to this, the other public official emphasised the regional contribution of the Ethiopian government towards the protection of the environment, he stated:

"The government takes different measures to integrate the protection of the environment into the development plan of each sector. It has also influenced climate change planning at the regional level through the Intergovernmental Authority on Development (IGAD) with a member state of neighboring countries Eritrea, Djibouti, Somalia, Kenya, South Sudan, and Sudan. Ethiopia has influenced these countries nations to prepare a regional climate change strategy for the period 2016 to 2030 to harmonize national efforts to adhere to low-carbon, climate-resilient sustainable development. This gave the country high images and political visibility at global environmental events".

According to the interviewees, although there are limitations related to the capacity of implementation, the ideology-driven political position is pro-environmental protection and has a positive significant impact on the environmental policy design process. They accentuated that at the minimum public officials shared those beliefs and values entrenched in the constitution and show their commitment to the protection of the environment while practising sustainable development.

However, interviewees from CSOs overtly explained that even if the developmental democracy political ideology is manifested to the level of considering environmental issues as human rights in the policy document, the practicality of protecting and preserving the environment while speeding up the economy sustainably is still a big challenge to Ethiopia. As one respondent said:

"Due to a political focus on economic priorities, the government encourages investment through the development and commercialization of the agricultural and industrial sectors. In such a case, it is most difficult to balance environmental interests with development interests, and the priority is mostly given to economic development with a high tolerance or expense of environmental damage".

Most of the interviewees, however, highlighted that the development and implementation of a climate-resilient green economy strategy in Ethiopia envisioned a climate-resilient middle-income economy by 2030, with a zero net increase in carbon emissions. This demonstrates the political commitment of the government to circumvent the conventional approach to economic development that exploited natural resources and increased carbon emissions and create a green economy where economic development goals are met sustainably while reducing emissions.

One of the public officials highlighted that Ethiopia launched the green legacy initiative in 2019 to plant 20 billion trees across the country over four years until

2024 which aimed to tackle climate change, reduce environmental hazards like deforestation soil erosion, and different types of pollution, and compensate the environment by creating sustainable favourable conditions for the agricultural sector and economic development.

Questionnaire respondents also reflected on the extent of the influence of public officials' political interest and developmental democracy as illustrated in Table 3.

Table 3: The influence of public officials' political interest on environmental policy decision-making

Statement		N (%)	Types of Working Organisation	
			Government	CSOs
Public officials influenced policy decision aimed to maximise their political interest (developmental democracy)	Disagree	20 (6.6%)	14 (7.9%)	6 (4.7%)
	Undecided	35 (11.5%)	20 (11.3%)	15 (11.8%)
	Agree	199 (65.5%)	113 (63.8%)	86 (67.7%)
	Strongly Agree	50 (16.4%)	30 (16.9%)	20 (15.7%)
	Total	304 (100%)	177 (100%)	127 (100%)
	Mean	3.91	3.89	3.94
	Median	4.00	4.00	4.00
	SD	0.755	0.804	0.682

Source: (Authors' interpretation)

As depicted in Table 3 81.9% of the respondents agreed (16.4 strongly agree and 65.5 agree), the high mean score, 3.91, and the mode 4.00 indicate that respondents across the group perceived that public officials influence policy decisions to maximise their political party policy and developmental democracy.

Concurrently, most interviewees from public officials and focus group participants think that International Environmental Agreements (IEAs) are legally binding treaties negotiated, signed, and ratified by individual countries to address transboundary environmental issues that have common global features. The IEAs provide a policy not only for resolving transboundary environmental disputes, it also offers a framework for the development and convergence of national environmental laws. They believe that the National Environmental Policy should be compatible and comply with the international environmental accords that Ethiopia signed.

As one of the public officials stated:

> "Many environmental challenges are trans-boundary and global which can have a potential impact on every country. Ethiopia, unless it works in collaboration with other countries in addressing these global problems, will be affected or will affect the environment with its eco-unfriendly activities. Recognising this fact, Ethiopia has become a party to most of the international treaties to protect itself and the earth against destructive impacts and to promote environmental protection and sustainable development. Not only Ethiopia, the majority of countries in the world have adopted mandatory regulations and incorporated them into their national policies. Certainly, one of the driving forces for the revision of this environmental policy is also to comply with IEAs that are signed and endorsed recently as part of the national policy".

Most of the interviewees from CSOs also emphasised that due to the transboundary character of pollution and its impacts on global shared natural resources, cooperation with the global environmental context is inevitable, and this cooperation will bring about financial support and know-how from the donor partners, such as the World Bank Group and UN Agencies to the realisation of environmental protection.

Focus group participants also revealed that they have largely considered the global narratives and convention of environmental effects in framing environmental policy. According to one participant, the coherence and compliancy of policy options with the international environmental conventions are also taken into account as a major criterion to evaluate and select policy alternatives. Adding to this, another interviewee suggests that as the government signed the agreement it should comply with international environmental orders to establish sustainable relationships and garner significant support from the international community. By Article 9(4) of the 1995 Constitution, *"all international agreements ratified by Ethiopia are an integral part of the law of the land".'* The House of People's Representatives legislative process guideline (2017) requests the executives and the council of ministers to ensure that the policy complies with international conventions signed by the country.

Another respondent highlighted that the international environmental discourse that is undertaken at different times has created not only an opportunity for the exchange of knowledge and practice but also guides the dialogues of the National Environmental Policy makings. He added the implementation of agreed conventions by countries is also monitored and reported by the UN to signing countries. Questionnaire respondents also reflected this as indicated in Table 4.

Table 4: The influence of public officials on policy decision to comply with international environmental conventions

Statement		N (%)	Types of Working Organisation	
			Government	CSOs
Public officials influence environmental policy decision to comply with international environmental conventions	Strongly Disagree	3 (1%)	3 (1.7%)	–
	Disagree	17 (5.6%)	8 (4.5%)	9 (7.1%)
	Undecided	36 (11.8%)	23 (13%)	13 (10.2%)
	Agree	190 (62.5%)	108 (61%)	82 (64.6%)
	Strongly Agree	58 (19.1%)	35 (19.8%)	23 (18.1%)
	Total	304 (100%)	177 (100%)	127 (100%)
	Mean	3.93	3.93	3.94
	Median	4.00	4.00	4.00
	SD	0.787	0.812	0.753

Source: (Authors' interpretation)

The proportionality of respondents across all groups with the average mean score of 3.93 and mode 4.00 is tremendously in agreement with the view that public officials influence environmental policy decisions to comply with international environmental laws.

While policymakers are at the forefront of making decisions, they are also responsible for involving environmental experts and professionals. In this respect, respondents were asked for their reflection on the extent of environmental experts' influence on policy decisions motivated by their scientific knowledge.

Respondents at all levels, from the government sector and CSOs were overwhelmingly in agreement and perceive that environmental experts have influenced environmental policy decision-making motivated by their scientific knowledge. The overall mean scores and median 4.06 and 4.00 respectively indicate a strong move to a general agreement.

Most of the interviewees noted that the National Environmental Policy design process is largely dominated by technocrats drawn from departments of the environmental sector, and environmental academics and most of the participants of the opinion survey were also drawn from experts who are working in the environment and environment-related sectors. They portrayed that environmental policy is more allied with technical and scientific-driven information wherein

Table 5: The influence of environmental experts on environmental policy decisions

Statement		N (%)	Types of Working Organisation	
			Government	CSOs
Environmental experts have influenced environmental policy decision-making motivated by their scientific knowledge	Strongly Disagree	3 (1%)	3 (1.7%)	–
	Disagree	17 (5.6%)	8 (4.5%)	9 (7.1%)
	Undecided	36 (11.8%)	23 (13%)	13 (10.2%)
	Agree	190 (62.5%)	108 (61%)	82 (64.6%)
	Strongly Agree	58 (19.1%)	35 (19.8%)	23 (18.1%)
	Total	304 (100%)	177 (100%)	127 (100%)
	Mean	4.06	4.08	4.03
	Median	4.00	4.00	4.00
	SD	0.766	0.797	0.723

Source: (Authors' interpretation)

environmental experts play the leading role in establishing the facts about environmental realities.

An interviewee from CSOs and elected representatives also revealed that environmental issues usually include considerable scientific issues, albeit a wide consultation in the public realm is conducted; technocrats play the leading role in the framing of policy debates as well as in making the final decisions. From the response of the interviewee, it is noted that there is a technocratic attitude that advocates environmental policy decisions to be led by the opinion of scientific experts rather than by the preferences, experiences, and values of the general public obtained from policy deliberation.

CONCLUSIONS AND RECOMMENDATIONS

The need for the National Environmental Policy revision was first initiated by ACCRA that is made up of the Oxford Committee for Famine Relief (OXFAM), Save the Children International, Care International, and World Vision International, and it has been working to influence climate resilience policies and practices in Ethiopia. ACCRA has played the leading role in compelling and providing both technical and financial support to the government to take the initiative to fully

revise the Ethiopian National Environmental Policy. Conversely to the legal mandate, donor partners were the major initiators of the need for the revision of the National Environmental Policy although later on public officials weighed and valued the evidence about the inability of the existing policy in solving complex environmental problems and facilitated the policy revision process. The article thus affirmed that the strong collaboration of the NGOs with the environmental sector and the financial and human resource support obtained from the donor partners was a cause for the environmental sector to accept the policy revision initiated by the donor partners. As Keech and Munger (2015) remarked, budget maximisation has influenced the decision of public administrators and decisions to revise the policy. This process shows that the issue of the National Environmental Policy is more likely to get on the policy agenda when the interest of the issue advocates donor partners being aligned with the interest of the public officials.

Indeed, the right to initiate public policy in Ethiopia is only vested in the House of People's Representatives and the executive including the environmental sector. The House of People's Representatives legislative process guidelines (2017) defines the responsibility of initiating public policy as a duty of the government, the house, standing committees, and parliament groups; and prevents other bodies such as CSOs, opposition political parties, and interested groups, to initiate public policies. NGOs and other interested parties are not allowed to initiate public policy. Moreover, the then proclamation 621/2009 to provide for the registration and regulation of Civil Societies in Ethiopia inhibited CSOs that do not fit the definition of Ethiopian Charities/Societies to participate in human rights, democratisation, and policy advocacy until it was repealed by Proclamation No. 1113/2019. This finding may bring about an assumption that the proclamation (621/2009) to provide for the registration and regulation of Civil Societies in Ethiopia, which limit the involvement of civil societies that do not fit its definition of Ethiopian Charities and Societies, might not be strong in the case of some policy issues such as environment, and donor partner organisations. In this regard, Burgess (2017:118) also revealed that environmental NGOs cannot have a political agenda, they are treated far less harshly when compared with those who work in human rights and democratisation, and they are taken as partners of the government in the case of environmental protection activities.

This finding resonates with Ayana, Arts and Wiersum (2018) who studied the forest policymaking process in Ethiopia. These authors concluded that NGOs resort to indirect strategies to push for the adoption of a new policy when the formal avenue for their involvement in the policymaking process is not open. These strategies involve catalysing policy processes through actions, such as documenting and communicating field evidence and best practices, forming strong networks with key decision-makers, and investing sufficient human and financial resources to push the adoption of a new forest policy. A comparative

study conducted on South Africa and China echoed that due to a strict and controlling regulatory framework, environmental NGOs in China prefer to use mostly informal mechanisms such as personal relations and informal networks to have an impact on policy or influence policymakers (Burgess 2017:118).

The empirical analysis illustrated that the constitutional right of a citizen to live in a safe and healthy environment and the possible health and economic implications of environmental change served as guidance for policy revision. Due to the transboundary nature of the environmental problems, the policy revision is triggered by international environmental agreements and the need to create a coalition and eliminate global environmental problems. A recent study on lessons learned from two decades of international environmental agreements, also revealed that most countries are promoting and integrating the intentions of the international agreements and conventions into their national policies, strategies, and programmes motivated by the support they obtained and not to lose face and strengthen their relationship (Sand and McGee 2022).

While it is noticeable that policy change brings about a broad spectrum of activities including the establishment or restructuring of implementing instruments and agencies, the case of the revision of the National Environmental Policy conversely indicates that the need for policy revision was also caused by the restructuring of the institutional arrangements of the implementing agency. This finding is indeed consistent with de Coning and Cloete (2006) and Fox, Bayat and Ferreira (2006) that public policy is the product of public institutions where the formal structure and legal powers have an impact on the policy design process; and institutional changes shape public policy and public administrations have policy capacity so that they can promote the policy changes to which they are committed.

The composition of the policy design team shows that predominantly technocrats are involved in the overarching environmental policy design process; however, their decision is subject to be monitored by the steering committee established by public officials. As Peters and Rava (2017) emphasised, one of the significant resources that public administration agencies possess for policymaking is their expertise that has the actual technical knowledge and knowledge of their clients. Yet, their decisions are subject to review and scrutiny by the steering committee established from public officials to provide overall direction and monitor the work done by the technical team.

The problem identification processes produced evidence and acknowledge a significant number of new environmental items higher on the policy agenda that ought to be addressed by the newly revised environmental policy. This enables policy designers to obtain a deeper understanding and analyse the problem from different perspectives and to establish clear-cut causal linkages between the policy problem and its intended solution (Hankivsky and Cormier 2019). Yet,

the opinion survey conducted during problem identification is found tailored to limited homogenous segments of the population drawn from state actors. It is therefore only the government officials' and environmental experts' opinion and their institutional experience that plays a significant role in influencing the environmental agenda and the problem structuring process. This suggests that both the public officials and the policy design team alike do not comprehend problem structuring as an iterative process of problem definition and an important phase that helps to better address the community's problems. Policy designers should regard problem structuring as a significant task that requires not only the perspectives of public officials and experts, but also the views of social actors and social understanding to gain a deeper knowledge of the problem, identify conflicting assumptions, and to diagnose root causes that lead to the best solution (Hoppe 2018).

In addition to the major environmental problems the policy goals and objectives are designed taking into account the expectations of the international environmental conventions, and multilateral environmental agreements. The policy goals stated in these conventions needs to be refined according to the country's own context and implementation capacity constraints and timelines rather than overpromising, which results in under- delivery or underperformance. The context, the social, economic, political, technological, legal facets where the institution operates; and the capacity including the structural and functional capabilities, access to technological resources, financial capability, and leadership ability and knowledge and skill of those entrusted with the duty to carry out and execute the policies, should be considered to enhance the implementability of the policy (Caves and Oswald-Egg 2019 in Tiruneh 2023).

The National Environmental Policy goal was defined in broad aspirational terms, and describes the range of desired outcomes, or what is to be achieved by implementing the policy. It shows the end towards which the effort is geared, and provides direction and guidance to the community on the importance of environmental protection for ensuring sustainable development by aligning the current generation's development needs with those of future generations. This is a strong move and is in agreement with Turnpenny *et al.* (2015) who noted that policy goals show the destinations that are achieved when the issue at stake is addressed. However, the researchers opined that this ambition is very comprehensive and difficult to easily understand and show its connection with the objectives of the policy stated, unless it is disaggregated and simplified. Environmental goals can be stated using specific statements of outcomes that a country is aiming to achieve, for instance, minimising damage to the natural environment, limiting pollution and greenhouse gas emissions, reducing noise impacts, among others. Essentially, goals are considered coherent if they are consistent and congruent with policy objectives to effectively produce optimal outcomes. Additionally,

objectives should be concrete, organisational, and often quantitative and specifically defined. Yet, each of the objective statements of the National Environmental Policy is designed comprehensively and seems difficult to measure, and it does not describe the desired outcome and the precise actions that the people have to take to move closer to attaining the goal. The environmental problems/issues identified during the problem structuring process are not reflected in the policy objective statements. In the content of the policy that refers to the means and goals that the policy sets out to address or solve the perceived problem or policy issues will be clear, specific and measurable to enhance not only the quality of the policy design but also to enhance the success of policy implementation (Cloete and de Coning 2011:135–169). This indeed needs the policy designers' capacity knowledge and skill in terms of policy goals and objective setting so that they could design workable policy solutions that will improve environmental protection in Ethiopia.

Due to the ongoing changes over the last two decades, the revision of the National Environmental Policy is subject to rational policy analysis to address several emerging environmental issues identified during the problem identification process. Although policymakers did not make any reference to any models it seems that both the incremental and rational model has been considered to select policy options. The incremental approach was employed in particular to address those policy options that were part of the previous policy but had not achieved their goal due to the low implementation capacity of the country. Indeed, policy design may not terminate but continue to be reformulated throughout its implementation as informed learning takes place about its operational effectiveness and associated outcomes (Vining and Weimer 2015). The incremental approach was also applicable to considering the goals and objectives included in the international environmental conventions. In this context, the researchers argued that the implementation problems of the previous policy are most likely the result of the weak policy analysis in selecting the implementable policy options. This also needs a rational analysis to measure the practicality and administrative feasibility of policy options and select the preferred one. Adopting the intentions of the international environmental conventions without a systematic analysis of the context of the country could also have a repercussion on the quality of the policy and the implementation thereof. As Hayes (2017) remarked incrementalism needs a form of systemic rationality to build on practical experiences and use the intentions proposed by the international conventions.

Indeed, environmental policy is one of the public policies where a rational policymaking model is applied and policy option generation and selection process ought to be done with a comparative assessment using multi-criteria analysis or cost benefit analysis since it requires contemplating environmental sustainability and economic development. The policy design team has tried to consider

different criteria to select policy options. However, a comparative analysis has not been conducted and each alternative has not been weighted and rated to select the best policy options among alternatives that satisfy the objectives that the policy aimed to achieve. This resonates with Simon's (1976) thought that the policy design team may use a simple rule of thumb focusing mainly on the most relevant and/or seek a satisfactory course of action instead of exhaustively optimising alternatives and their resulting consequences. For instance, in the case of the application of renewable energy sources in agriculture, officials and experts might be more concerned about their performance and to comply with the international convention, than taking into account the financial capacity of farmers. Consequently, this may not be feasible for farmers and they may not buy into such a policy option. Unless different policy alternatives are generated and weighted based on the criteria identified by the team in consultation with citizens, the policy decision might be dominated by the choice of one group and this will have a repercussion on the legitimacy and implementation of the policy. Owing to such limitations, Cairney (2016) remarked that bounded rational policymakers are much more likely to introduce incremental policy changes based on learning from experience through addressing the unintended consequences of previous policy decisions. Furthermore, self-interested public officials, political elites, bureaucrats, and technical experts may act in terms of their professed motivations considering their idealistic and professional concerns and interests (Eryılmaz 2015; Gill 2017). Most studies revealed that political ideology has long been identified as an important factor in shaping the policy preferences of individuals and in determining their attitude towards environmental issues (Hula *et al.* 2017). In this regard the article found that the ruling party policy in Ethiopia, developmental democracy which has a left ideological dimension, is likely to be a major element of the value that public officials place on influencing environmental policy decision-making. The Constitution and the ruling party policies are pro-environmental protection and have a positive significant impact on the environmental policy decision process. Most studies have conveyed that a left ideological dimension constitutes a crucial determinant of all sorts of environmental attitudes, including support for pro-environmental policies (McCright and Dunlap 2013; Niklas *et al.* 2017). People who consider themselves as being to the right (or conservative) prefer a smaller government, and a free-market economy and tend to deprioritise environmental issues and display weaker environmental support (McCright and Dunlap 2013). Other studies add to this picture, a growing attitudinal cleavage as right-wing and left-wing supporters are gradually moving further and further apart in matters related to the environment (Niklas *et al.* 2017).

However, previous studies in Ethiopia revealed that the political support only serves the political agenda rather than genuine environmental concern as the political intent is still not fully translated to environmental performance (Desalegn

2018). The trade-off between economic growth and the protection of the environment has a great impact on the practicality of protecting and preserving the environment, while speeding up the economy sustainably is still a big challenge to Ethiopia. Although Ethiopia played the highest role internationally in political leadership on green economy and climate change, Ethiopia's environmental achievements are below the record of countries with less international knowledge on environmental issues such as Kenya, Ghana, and Mozambique (Sebsib, Mulugeta and Shimellis 2019). Based on the 2020 Environmental Performance Index (EPI) (2020), Ethiopia ranks 141 out of 180 countries on environmental health and ecosystem vitality. A recent study by the Ministry of Environment reveals that out of the 163 factories surveyed, 101 (61.93%) release their industrial wastes directly into the environment without any treatments. Due to institutional dissonance and lack of political will and commitment to mainstream environmental issues into national development goals, the environmental issues of Ethiopia only serve the political agenda rather than the genuine environmental concern as the political intent is still not fully translated to environmental performance (Sebsib *et al.* 2019:88). The emphasis of public officials on short-term economic gain might be drawn from their interest to stay in power. As Gill (2017) emphasised in public choice theory the best way to understand the behaviour of public administrators is along roughly maximising lines, there is little reason to think that the state will generally be in favour of the public interest. There is some evidence to support this view in Austria where the motivations and horizons of public officials are often inhibited by their political interests to stay in power and their close involvement to satisfy economic interests (Bothe 2019). This indicates that the behaviour of public officials' self-interest may influence public policy decisions unless there is the possibility of the pluralistic political process that facilitates the free exchange of opinions.

There is a strong belief among public officials that the National Environmental Policy should be compatible with the international environmental accords that Ethiopia signed. This belief has constitutional legal grounds as all international agreements ratified by Ethiopia are considered as an integral part of the law of the land (Constitution 1995:Article 9,4). The House of People's Representatives legislative process guideline (2017) requests the executives and the council of ministers to ensure that the policy complies with international conventions signed by the country. Due to the transboundary character of the environment, cooperation with the global environmental context is inevitable, and this cooperation will bring about financial support and know-how and guides the dialogues of the National Environmental Policy makings from the donor partners, such as the World Bank Group and UN Agencies to the realisation of environmental protection. If the cooperation allows the states to eliminate environmental problems in their country, the influence of the international regime on the national policy

can thus be considered important from the rationalistic point of view. This finding resonates with what Huang (2002) signifies in his model of obedience to international environmental law that states have tried to comply with the international environmental orders based on the motivation not to lose face and to strengthen their relationship with the international community. A study conducted on Baltic countries inferred that the formation and successful implementation of environmental policy in these countries was and still is largely dependent on the influence of the international environmental regimes (Kratovits 2011). The international convention guides signatory countries not only to create overarching environmental goals and objectives but also to set implementing mechanisms to achieve them (Tunnicliffe *et al*. 2020). While developed states are the largest contributors to climate change and global warming, developing states are currently obligated and forced to switch to renewable energy sources, which may restrain economic development and directly impact citizens. For instance, farmers in Ethiopia who could not afford it carry the consequence. This will thus affect the successful implementation of policies that incorporate ambitious goals and targets stated in the IEAs unless issues related to feasibility, consequences of action, and other constraints are taken into account. As the means justify the end, a pragmatic look is important for policy designers to consider the practicality of policy options instead of taking IEAs and their party politics for granted.

Furthermore, the study found that the traditional view which reified environmental issues as technical and the domain of experts promoted environmental policy decisions to be led by the opinion of scientific experts. A recent study by Patricia (2022:1) revealed that the climate governance debate has been dominated by scientists and interest groups and the public rendered 'spectators'. In absolute terms, this approach denies first, the controversial and political nature of environmental decisions that cannot rest mainly on the knowledge of experts; and second, it denies democracy and democratic deliberation that opened up to more diverse forms of knowledge, experiences, values, and preferences of the general public (Mekonnen, Kidemu, Abebe, Semere, Gebreyesus, Worku, Gebre and Chernet 2021:9). These authors further highlighted that understanding and integrating experiential knowledge systems into the formal policy process has a multiplier effect on other government interventions such as through facilitation of technology adoption, and in building trust among citizens and government (*ibid*). Studies likewise suggest that more ecologically-sensitive and democratic decision-making about complex scientific and technological issues can emerge and cohabit if the differently embodied perspectives of decision-makers that are from scientists to citizens are acknowledged (Machin and Smith 2014; OECD 2017). In contrast to technocratic, democratic decision-making assumes that all affected by a given decision have the right to participate in the making of that decision either directly or through their representatives. Since the understandings

of the environment and values placed on different types of nature are socially constructed differently by different actors and so are subject to significant contestation, it is imperative to take into consideration the experiential knowledge and values of different actors. For instance, the issue of Ozone Depletion was first constructed and presented to the general public through science but with rapid uptake by the media, business groups, government, and citizen policy debates on the way to control substances associated with ozone depletion. The discussions about global climate change, desertification, biodiversity, deforestation, water management, and other themes are held in international contexts with different stakeholders. This will not only open the space for the participation of different actors but also will create a way to transform science into the public and improve environmental education and then enhance the relationship between scientific experts and the environmentally informed public. As pronounced by Keeley and Scoones (2000:13) the interaction of a wider range of knowledge and perspectives beyond the boundaries of science and scientists brings about not only shared values, consensus, and ultimately, better policy decisions but also creates a balance between science and public trust and enhances institutional legitimacy.

IN CLOSING

This article investigated the National Environmental Policy design process, the extent to which the rational policy analysis is conducted and the bounded way in which decisions are shaped by public officials' self-interests to comply with their political ideology or party policy, and their motivation to comply with the international environmental conventions; and the extent to which the decision falls under the influence of the environmental experts' scientific knowledge and their institutional experiences. The right to initiate public policy in Ethiopia is vested solely in the House of People's Representatives and the executive. Contrary to what the law and process of policymaking stated the National Environmental Policy was initiated by development partners, although public officials later on weighed and valued the evidence about the inability of the existing policy in solving complex environmental problems and facilitated the policy revision process. The analysis conducted on the contextual environmental problems that are affecting the country identified by the gap analysis survey; international environmental agreements and the need to create a coalition and eliminate the transboundary environmental problems; and the restructuring of the environmental sector triggered the need to revise and design the environmental policy. These analyses provide evidence to acknowledge a significant number of new environmental issues higher on the policy agenda that ought to be addressed by the newly revised environmental policy. The National Environmental Policy goal

is defined focusing on intergenerational equity and a wide overarching target of the National Environmental Policy. It shows the ultimate goal towards which the effort is directed and provides direction and guidance to the community regarding the importance of environmental protection in ensuring sustainable development, aligning the current generation's development needs with those of future generations. However, this ambition is very comprehensive and difficult to understand and show its connection with the objectives of the policy and the desired outcome and the precise actions that the policy implementers have to take to move closer to attaining the goal. Policy targets driven from international environmental agreements are often overpromising given the country-specific context and capacity and may lead to policy failure. Furthermore, the policy decisions are made without generating the possible policy alternatives, weighing up and comparing their relative consequences using specified multi-criteria and cost-benefit analysis to make the optimal policy decision. The National Environmental Policy design process is dominated by the ideological, incremental, and elitist policy design approach rather than rational policy analysis. Even though the ruling party policy in Ethiopia is pro-environmental protection and has a positive significant impact on the environmental policy design process the trade-off between economic growth and the protection of the environment has a great impact on the practicality of protecting and preserving the environment while speeding up the economy, and sustainability remains a big challenge to Ethiopia. The environmental policy decision is influenced by public officials' need to comply with international environmental conventions. Adopting the intent of international environmental conventions and agreements without measuring their practicality and administrative feasibility is simply overpromising. These policy options should be adjusted according to the country's priority and own capacity instead of overpromising and creating unrealistic goals which could have a side effect on the quality of the policy and the implementation thereof which in turn results in a negative consequence on institutional legitimacy and public trust. This study thus recommends that scientific rational policy analysis should be conducted using a clearly defined multi-criteria analysis to exhaustively list policy alternatives, weigh their relative consequences and select the optimal policy options that could fulfil the intended objective of the policy.

NOTE

*   The article is partly based on a dissertation for a Doctor of Philosophy in Public Administration (PhD) degree under the supervision of Prof C Alers and Prof W N Webb, titled: Tiruneh, T A. 2023. *Citizen participation: a sine qua non for effective design of the National Environmental Policy in Ethiopia*. Unpublished PhD thesis. Pretoria: University of South Africa.

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Survival of International Institutions in a Dynamic Global System

A Case Study of the International Monetary Fund

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ABSTRACT

This article examines how the International Monetary Fund (IMF) has continued to survive in a dynamic global system in which its dominance is no longer the central feature of the international economic order. Therefore, the thrust of this article is to identify contemporary challenges facing the IMF as a major financial institution and the strategies it has adopted to address these challenges. The hegemonic stability theory was employed as the major analytical framework to explain the rationale behind the challenges of having emerging competitive institutions as alternatives to the IMF. This article is exploratory and adopted unobtrusive research methods in terms of content analysis and conceptual analysis. Data was obtained from secondary source material. Based on the analysis, it was observed that the IMF has been reinventing itself and finding new roles to perform to survive and that emerging competitive institutions such as the Asian Investment Infrastructure Bank (AIIB) and Brazil, Russia, India, China, and South Africa (BRICS) as alternatives to the IMF in its field of services constitute the major contemporary and fundamental challenge confronting the IMF's survival

and existence. These emerging institutions are also a product of a counter-hegemonic strategy championed by China to displace the liberal institutional global order controlled by the United States. Consequently, if China succeeds and the IMF is unable to deal with its challenges, its survival will be at stake. This article therefore suggests that the IMF continues to reinvent itself to perform new roles and fully implement substantial reforms to improve its governance structure, as well as to embrace realistic remedies to address its criticisms and weaknesses, to retain its aggrieved members and its status as a dominant financial institution.

INTRODUCTION

After World War II, the dissolution of the League of Nations (LN) led to the establishment of a liberal institutional order that changed the global power balance (Muggah and Tiberghien 2008; Champaklal 2015). International Institutions (IIs) became significant as they embodied roles and assumed responsibilities that the state on its own could not handle (Vousa & Borovas 2015). They ensure global governance, stability, and peace, and they have become central to the study of world politics since they provide a platform where members can discuss and find solutions to contemporary challenges affecting the international system, as well as facilitating cooperation and interaction among communities of states (Keohane 1988; North 1991; Kapur 2000; Muggah & Tiberghien 2008; Economic Watch 2010; Archer 2014; Laura 2015; Prasad 2017; Gray 2020; Dijkstra & Debre 2022; Colombatto 2022).

Today, IIs play important roles in solving transnational challenges such as humanitarian emergencies, conflicts, economic crises, and environmental concerns (North 1991; Schemeil 2013; Laura 2015; Colombatto 2022). Technological advancements and globalisation have made IIs ubiquitous entities (Karns *et al*. 2015; Vasquez 1999). However, they face multifaceted challenges and criticisms from both internal and external environments, such as lack of funding, legitimacy issues, and dissatisfaction from members, economic nationalism, and the threat of exits (Shai 2016; Shai *et al*. 2019; Von-Borzyskowski & Vabulas 2019; Heinkelmann-Wild 2021).

The ability of IIs to overcome these challenges and provide solutions to global issues will determine their relevance and survival. This article aims to explore how IIs have continued to survive despite these challenges and what the future holds for them, particularly the IMF.

The IMF has been a resilient institution in the face of a rapidly changing global economic order. Since its establishment, it has faced numerous challenges that

have threatened its dominance. Both its internal and external environments have been the source of these challenges. The IMF's internal environment is plagued by politicisation, an informal governance structure, leadership issues, and unfavorable perceptions from its members. Meanwhile, its external environment has been marked by crises such as the breakdown of its pegged exchange rate between 1968 and 1971, the oil shocks of the 1970s, the rise of independent African nations in the 1960s, financial crises in Asia, Latin America, and Europe, the fall of the communist bloc, and geopolitical events like Brexit and Trump's isolationist stance (Meyer & Rowan 1977; Daft & Weick 1984; Carlens 2004; Schemeil 2013; Shai *et al.* 2019; Von Borzyskowski & Vabular 2019; Gray 2020; Heinkelmann-Wild 2021).

However, the IMF has been widely criticised mostly for its conditionalities attached to the use of its resources and programmes, as well as its informal governance structure. Many countries that have received support from the IMF have expressed dissatisfaction with the harsh conditionalities imposed, which often did not take into account their domestic environment and prioritised investors' interests over their own needs. Furthermore, the IMF's policies tend to aim at transforming these economies through its Structural Adjustment Programs (SAP), without considering the unique nature of each country's economy. This has often resulted in a negative borrowing experience and counterproductive outcomes (McManners 2008; Stone 2008; Ekwonna & Nosiri 2016; Shapiro 2017; Prasad 2017).

Critics have also accused the IMF of being non-responsive in its governance. They claim that the IMF is more responsive to its highest investors rather than the countries it is supposed to be accountable to. The IMF, which is made up of 190 countries, is being run by only seven countries, which control the institution's operations through their financial quota (Ekwonna & Nosiri 2016). For instance, European countries, Japan, Canada and the United States (US) together have about 63% votes, while 80 underdeveloped/developing countries share 10% between them. As a result, rich countries often use their veto power to block proposals they do not like, which undermines the ability of the least-developed countries (LDCs) to influence IMF policies. Also, the IMF governance structure does not reflect the current economic weight of most of its developing members like China, India, etc. (Nowzad 1982; Stiglitz 2003; Bradlow 2006; Mombiot 2006; Ekwonna & Nosiri 2016).

These issues have led to widespread dissatisfaction among IMF members, who have become unwilling to cooperate with the institution. However, the structure and environment of the IMF have made it challenging to address these concerns, as it is heavily influenced by its major investors. This has perpetuated a culture of dominance through an unequal relationship, resulting in constant animosity between the IMF and its dissatisfied members (Voutsa 2011; Champklal 2015;

Shapiro 2017). As a consequence, some members have sought to create alternative institutions to the IMF, making its survival a major concern.

The article aims *inter alia* to identify the contemporary challenges faced by the IMF, to highlight the strategies and efforts utilised by the IMF in addressing these challenges and to determine whether these strategies and efforts have yielded positive outcomes.

THEORETICAL FRAMEWORK

The analytical framework used in this article will include the Rational Choice Institutionalism (New Institutionalism) Theory, Keohane's Contractualism Theory, Classic Rationalism, and the Hegemonic Stability Theory (HST). The article is underpinned by the Rational Choice, Contractualism, and Classic Rationalism theories to understand why the IMF continues to thrive despite the challenges it has faced over the years. The HST will be used to explain the contemporary challenges faced by the IMF, and this will be the main focus of the article.

Rational choice institutionalism

New institutionalism came about in the 1970s as a reaction to the behavioural perspectives of the time (Hall & Taylor 1996). Scholars in international relations drew inspiration from research on domestic institutions and came up with institutionalism theory. According to this theory, institutions can promote cooperation even without a formal governance structure (Aceves 1997:242). The basic assumption of institutionalism theory is that states are the primary actors in international relations and they serve as egoistic and rational actors, while the international system is anarchic (Aceves 1997; Jonsson & Tallberg 2001). There are three variations of institutionalism in international relations: rational choice institutionalism, historical institutionalism, and normative institutionalism. For this article, the authors apply rational choice institutionalism to understand the survival of institutions. This is an institutional analysis informed by rational choice theory and influenced by developments in the new institutional economies. They believe that IIs emerge as a result of their interdependence, strategic interactions, collective actions, and dilemmas. They claim that institutions emerge and survive because they fulfill important functions for their member states (Jonsson & Tallberg 2001). It follows therefore that as long as the IMF continues to perform important functions and stays relevant, it will continue to survive.

Contractualism theory: IIs are vital to effective cooperation among states. Keohane's contractualism theory (1984) explains that transaction costs are a significant barrier to cooperation. As such, institutions facilitate negotiations that lead

to mutual benefits between states. Even if the conditions that facilitated their creation disappear, the institutions persist. Maintaining a low-performing II is better than having none, due to the high cost of creating a new one. This is why many underperforming institutions, such as the IMF, continue to exist despite their challenges (Keohane 1984; Jonsson & Tallberg 2001).

Classic rationalists: According to classic rationalists (Keohane 1982), the survival of IIs depends on demand and supply. There must be a demand for cooperation to address international challenges and facilitate cooperation among members. Additionally, states joining IIs expect results or efficiency in establishing cooperation (Abbot & Snidal 1998; Hooghe, Lenz & Mark 2019). When demand and supply are not mutual, and the IIs fail to achieve their objectives, they become obsolete (Dijkstra & Debre 2022). The IMF will continue to survive as long as it remains relevant and continues to supply the demands of its member states.

Hegemonic stability theory: The HST is a major theory used to explain the IMF's survival in a dynamic international system. It is rooted in economics, political science, and history, and was inspired by Charles Kindleberger's study of the Great Depression in his book "*The World in Depression, 1929 -1939*". The theory suggests that a single dominant state is necessary to enforce interactions among states. This has been demonstrated by the past two centuries, which saw Britain (1850–1914) and the US (1945-present) as global hegemons (Jonsson & Tallberg 2001; HST 2023). The Bretton Woods Institutions – the World Bank, IMF, and the General Agreement on Tariffs and Trade (GATT) – are significant expressions of the US's post-war dominance, which widened its influence as a hegemon and strengthened its leadership in the world economy (Leffler 1992; Latham 1997; Gu 2017).

However, the past two decades have witnessed the decline of US hegemony and the rise of China. Scholars predict that China will soon succeed the US as a global hegemon, given its large size and population, rising economic growth, and foreign direct investment (FDI) (Patharapong 2017). According to the HST, this challenge to the IMF's survival and the threat of alternative institutions in the IMF field of services is a counter-reaction to the US's Western institutional hegemony. China has continued to challenge the IMF through BRICS and the AIIB by providing loans and aid. Its increased participation and engagement in existing international institutions and the creation of BRICS and AIIB for counter-hegemonic purposes help enhance its position in the existing institutional order while reducing the US's influence in the liberal global institutional order (Ikenberry & Lim 2017; Rae 2017). Even though China is not yet a hegemonic power, it possesses the features, especially in the decline and challenge of US hegemony (Strange 1987; Strange 1996).

In conclusion, the HST explains the threat to the IMF's survival as the threat of having alternative institutions in the IMF's field of services as a counter-hegemonic strategy of China to reduce the US's hegemonic institutional influence.

IMF'S ENVIRONMENT: CONTEMPORARY CHALLENGES

The IMF was founded with the best intentions and thoughtful design, and states joined it with similar intentions (Daft & Weick 1984). For Matsangou (2007), the institution that was discussed in New Hampshire is quite different from the reality that it produced. Over the years, the IMF's course has changed in response to its internal and external environment, creating challenges and complexities that have weakened its potential to fulfill its roles. This has led to criticisms and concerns that threaten the IMF's existence and credibility (Tziamalis 2017). The IMF's inability to address the concerns of its members and global economic and financial imbalances that threaten the stability of the financial system has made it seem incompetent, causing members to rethink their participation in the institution (Bird & Rowland 2010). Its reputation has never fully recovered since the financial crises of East Asia and Argentina in 1997–1998 and 2001–2002, respectively. Furthermore, its influence has been shrinking in most low/middle-income countries since the aftermath of its infamous SAP financial crisis (Weisbrot 2016). In 2005, Brazil followed by Argentina, Serbia, Indonesia, Uruguay, the Philippines, and Turkey started paying off their loans ahead of schedule and even threatened never to return to the IMF for economic survival, and in 2018 Jamaica followed suit (Ambrose & Greco 2007; Dahir 2018). In early 2008, Bird and Rowland (2010) noted the IMF was considered irrelevant by many countries, as its lending was at a historically low level and its influence over economic policy reform was low due to the conditionalities attached to its loans. Countries opted to build their foreign reserves instead of depending on the IMF's loan mercy (Tziamalis 2017).

Many countries have threatened to withdraw from the IMF due to the harsh austerity measures of IMF conditionalities and its SAPs, resulting in an economic downturn. Countries in Asia, Latin America, Africa, and parts of Europe have either threatened to pull out or sought alternatives to the IMF (Kihuria 2002; Ambrose & Greco 2007; Martin 2015; Weisbrot 2016; Tziamalis 2017; Sachdeva 2017). For example, several South American nations formed the Bank of the South, an alternative to the IMF, after its increased unpopularity among some countries in the region. The idea was first proposed by the then-Venezuelan president, Hugo Chavez, in December 2006, as part of his battle against the West's influence and international financial institutions, which he saw as "tools of Washington". Argentina, Brazil, Bolivia, Ecuador, Paraguay, and Uruguay all joined the initiative. The then Venezuelan finance minister, Rodrigo Cabezas, believed that the creation of a new institution would demonstrate that the world was changing, and the new institution would cater to the South American financial crisis (Heredia 2007). Additionally, when the IMF threatened to discontinue funding Greece's financial crisis in 2010, some European countries hinted at establishing their own monetary institutions (Tziamalis 2017).

In 2011, the African Union (AU) established the African Monetary Fund to promote monetary integration. The institution's mandate was to support its members and promote monetary cooperation by ensuring the convertibility of African currencies. This was in response to the IMF's slow response to reforms and restrictive policy conditions. The AU also approved the creation of the African Investment Bank and the African Central Bank to perform functions, which overlapped with the IMF's three core pillars of work (Martin 2015).

In 2014, Brazil, Russia, India, China, and South Africa established the BRICS Contingency Reserved Arrangements with a capital of USD100 billion. China set up the AIIB in the same year, backed by 25 countries (Tziamalis 2017). In 2016, China, Taiwan, Singapore, and Hong Kong supported the establishment of a USD100 billion Asian Monetary Fund (AMF) as an alternative bank for Asia (Wesbrot 2016). Moreover, South Korea, a country underrepresented relative to its economic clout, threatened to back any Asian institution that springs up (Mckenna 2007). The US under Donald Trump was indifferent to the IMF, and his economic philosophy was opposed to the founding principles of the IMF. Trump's isolationist stance of spending inwardly did not support the IMF (Tziamalis 2017).

Given the IMF members' threats of exit, their moves to find new international institutions, the question of its legitimacy, and the threat of rising competitive institutions in the IMF's field of services, the IMF is struggling to survive. The survival of the IMF, a 3000+ strong international bureaucracy, is at stake. Unless the IMF finds a new purpose, its survival is uncertain (Ambrose & Greco 2007; Bordachev 2022; Colombatto 2022; Schuette 2022).

IMF's quest for survival: Strategies and efforts

The IMF has faced challenges over the years but has managed to survive and adapt to changing circumstances better than some other international organisations (Kehoe & Chari 1999; Bordachev 2022). As Kehoe and Chari (1999) noted, the IMF has sought new roles to sustain itself, which is a common trait of bureaucracies. The International Labor Organization (ILO) is another example of an international organisation that has survived for a long time despite facing numerous challenges. Like the IMF, the ILO has undergone changes and criticisms but has evolved and learned from its mistakes, thus remaining relevant (Helfer 2006).

To maintain its hegemonic status, the IMF has been devising strategies to gain back its influence. While the IMF claims that its mandate has not changed, it has acknowledged that its approach to achieving its goals has evolved to adapt to global challenges and development (Okpara 2019). For example, the IMF proposed a reform in 2010 to boost the representation of emerging economies like China, India, and Brazil, which was implemented in December 2015. This reform

will allow these countries to have more influence and power in decision-making (IMF Quota Reform 2010).

The IMF's former managing director, Christine Lagarde, worked hard to rebrand the institution. Lagarde visited many countries, especially in Africa, to strengthen partnerships and offer free consultations. During her visit to Nigeria, she insisted that she was only giving policy advice to the presidency to help improve the country's economy, and was not there to negotiate a loan with conditionality (Copley 2016). Lagarde's efforts to sustain the IMF include expanding its firepower, gaining approval for quota reforms, maintaining relationships with shareholders and disgruntled members, and seeking new roles to remain relevant (Buerkle 2016; Okpara 2019). These moves are part of her survival strategy, as the IMF was once sought after, but must now work hard to maintain its relevance.

The IMF has expanded its advisory services to include policy areas such as climate change, gender equality, and human rights. This is due to the recognition of the need to extend its influence and shape the global policy debate. Lagarde also encouraged officials to use the organisation's lending and economic surveillance activities to address income inequality, promote economic opportunities for women, and combat climate change and other environmental risks (Buerkle 2016). While in the past, the IMF rarely addressed environmental issues, it has now become significant to its core functions, as climate change has significant implications for world economies. The IMF has reconsidered its role in addressing climate challenges and has identified new roles it can play. First, the IMF has conducted valuable research on how carbon emissions can be reduced through market prices that show the negative externalities of these emissions. Second, the IMF has become a leading voice in quantifying and eliminating fossil fuel subsidies and introducing carbon pricing mechanisms (Martinez-Diaz 2017). Third, the IMF has helped to align macroeconomic and fiscal policies with climate change resilience for some countries (Mountford 2019). While some scholars view these deviations as mission creep, the need to perform new roles is simply a survival strategy for the IMF to remain relevant.

Moreover, the IMF has started working closely with civil societies to provide more effective national surveillance and lending programmes (Smith 2018). Unlike in the past, when the IMF imposed conditionalities on countries without studying their economies (Ekwonna & Nosier 2016), the organisation now collaborates with civil societies to better understand the economies of the countries it is working with.

Future challenges of the IMF

Unfortunately, the survival strategies employed by the IMF have not yielded many results. The proposed reforms in 2010 failed to address the challenges of

representation, resulting in quotas and voices of several emerging economies being out of line with their growing economic weights. For instance, China and India's representation remained underwhelming. Additionally, Europe still has eight of the 24 chairs, meaning it is over-represented in the executive board, which is the IMF's most important decision-making body. Although European elected seats gave two-thirds of the chairs to emerging countries, they mainly benefitted Eastern European countries like Poland, Czech Republic, and Hungary, still retaining power in the European region (Wade & Vestergaard 2015). Therefore, voting shares after the reform did not reflect the change in the balance of global financial power, and most of the packages in the reforms were not implemented within the agreed time frame, leading to the failure of the reforms to resolve the informal governance structure challenges (The Hindu 2017). This failure left the IMF with more dissatisfied members who are now looking for alternatives and threatening to leave the IMF.

The IMF's quest for change and survival is being met by stiff resistance from within its institution. Its rich shareholders would not allow significant change that does not benefit them (Ekwonna & Nosiri 2016; Okpara 2019). Moreover, the global financial crisis and the impacts of the harsh conditionalities of SAP are still fresh, leading to many affected members becoming uninterested in IMF loans and advice. Many others have become distrustful of the IMF and are actively seeking or trying to create alternatives to the IMF (Holder, 2008; Kentikelenis 2016; Burak 2017).

Despite its efforts and survival strategies, the IMF's future is not certain. There has been a decrease in demand for its services, especially in its lending programmes. In the 1980s, almost half of the members (73 out of 152) had a financial obligation to the IMF. However, after the financial crisis, only 35 countries within sub-Saharan Africa (13), Europe (10), and Central Asia (12) had active lending programmes, and by 2016, only five countries from Latin America and East Asia had active IMF programmes out of 16 that had them in 2000 (Boughton 2000; Kentikelenis 2016).

Consequently, there has been an increase in competitive institutions that offer services similar to the IMF's. This has reduced the IMF's influence on many of its members who are not satisfied with its services. For example, BRICS has been borrowing from its members who are also members of the IMF. By 2018, BRICS had approved up to 23 loan projects for USD 5.7 billion for its member countries and lent USD3–8 billion. In addition, by 2018, the AIIB had lent a total of over USD4.4 billion on 24 loan projects (Reuters 2017; Babones 2018).

It is not just competitive alternative institutions that pose a threat to the IMF's survival. Emerging states, such as China, have also become a challenge. China has encroached on lending territories, taking advantage of the IMF's unpopularity to advance its multilateralism strategy. By offering attractive lending models

and avoiding sensitive lending models, China is now lending heavily to developing countries. Most of China's clients are African countries that now resent IMF loans (Maim 2016; Prasad 2017; Fifield 2018; Duke 2018; CARI 2018). Angola in 2009, Ghana in 2011–2012, and the Democratic Republic of Congo (DRC) in 2007–2009 are three instances where China's loans challenged the IMF's jurisdiction (Maim 2016). From 2001–2017, China extended loans worth USD143 billion to African governments (CARI 2018). Additionally, China has funded more than 4 300 projects in 140 countries and territories (Murphy 2012). In 2015, China offered USD60 billion in loans, loan write-offs, aids, and other forms of financing, including USD15 billion in grants, interest-free loans, and concessional loans, USD 20 billion in credit lines, and USD10 billion in special funds for developing financing (Pozzebon 2015; Fifield 2018). The IMF has not been able to address these challenges effectively through reforms, strategies, and new roles. The IMF must reinvent itself, fully reform itself, and adopt better strategies to tackle these challenges that threaten its survival (Schuette 2022).

CONCLUSION

The IMF has been facing many challenges over the years, and it is on a survival path. Nevertheless, it has managed to reinvent itself consistently by finding new roles to play and filling gaps to remain relevant. According to the rational-choice theory, the IMF has been strategic in performing essential functions because bureaucracies are capable of taking themselves to where their founders did not intend to go, to survive (Jonsson & Tallberg 2001). Keohane's contractualism theory explains the IMF's survival and persistence despite members' dissatisfaction, thanks to high replacement costs, valuable institutional assets, and secretariat officials. Creating a new institution outweighs the cost of maintaining the existing IMF (Keohane 1984; Jonsson & Tallberg 2001; Gray 2018; Dijkstra & Debre 2022). The classic rationalist explains the IMF's survival through demand and supply. Since the IMF's supply is perceived to be failing and its demand is in decline, its survival is at risk (Abbot & Snidal 1998; Dijkstra & Debre 2022). The challenge to the IMF's survival is described by the HST, which sees China's counter-hegemonic institutionalism strategy as a way of reducing the US's hegemonic institutional influence. China participates actively in the IMF and facilitates the creation of alternative competitive institutions like the BRICS and the AIIB to challenge the existing hegemonic institutional order that has the IMF as a hegemonic financial institution (Ikenberry & Lim 2017; Rae 2017).

The IMF faces significant challenges in the form of rising competitive institutions such as AIIB and BRICS, which threaten its survival in an increasingly evolving international world order. While the AIIB and BRICS may not have global

reach yet, they have already taken away much influence from the IMF. If countries continue to subscribe to these alternative institutions, the IMF may become obsolete. The IMF has a long history of adapting to challenges in the global economy. As a bureaucracy of over 3000 staff, it has constantly reinvented itself to embrace and weather challenges better than most other international institutions.

However, it is important to note that bureaucracies like the IMF are not immortal. Even if they strive to sustain themselves and have high institutional assets or large resources that are difficult to replace, this is not enough to guarantee their survival. While the IMF may persist and/or reinvent itself by seeking new roles to perform to stay afloat, this can only serve as a temporary relief and not a permanent solution.

Without substantial reforms and realistic remedies to its significant challenges, the consequences for the IMF could be dire. It may become a liability to its shareholders, its members that are not satisfied may withdraw from the IMF, and it may lose its relevance or become obsolete. Even if it manages to survive due to its high institutionalisation and bureaucracy, it may no longer have the power to make any meaningful impact on the international economic and financial world order.

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  - **Article:** Auriacombe, C.J. 2007. Deconstructing the public interest for application in South Africa. *Administratio Publica*. November 2007. 15(1):28–52.
  - **Official publication:** Public Service Commission. 2008c. Report on the Audit of Reporting Requirements and Departmental Monitoring and Evaluation Systems within National and Provincial Government. Public Service Commission. Pretoria: Government Printers.
  - **Internet reference:** Patton, M.Q. 1999. Utilization-Focused Evaluation in Africa, training lectures presented at the African Evaluation Association, 13–17 Sept. 1999. Nairobi. Kenya. Available at: www.afrea.org/documents/document.cfm?docID=64 (Accessed on 25 March 2009).
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